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GSCA 2016 Conference in Toronto

The Giant Screen Cinema Association held its annual international conference and trade show in Toronto, ON, Canada, Oct. 4–7. More than 350 people attended the meeting, which included screenings of 16 new films (including two in rough- or fine-cut stages), 29 films in production, and 19 films in development. (This total of 64 film projects is the highest since 1999.) The conference also featured four professional development sessions, a technical session on immersive audio, the GSCA's annual awards presentation, a trade show, and the GS industry's first demonstration of a 8K fulldome projection system.

Flat-screen presentations were held at the Cineplex Scotiabank IMAX Theatre, a 400-seat auditorium with a 60x78-foot (15x24-meter) screen and the world's first IMAX laser projection system, installed in December 2014. Dome screenings and the fulldome demo were held at the Shoppers Drug Mart OMNIMAX Theatre in the Ontario Science Centre. It has a 79-foot (24-meter) dome and an IMAX GT film projector, installed in 1996.

Digital dome demo

The highlight of the meeting was the first public demonstration of Evans & Sutherland's "True8K" fulldome projection system, featuring ten Christie Mirage 4K projectors that were blended together to provide resolution of more than 8,000 unique pixels across every meridian of the dome. (Earlier fulldome systems from E&S and other companies that have been marketed as "8K" actually project only about 6,500 pixels.)

The temporary installation in Toronto placed six projectors in the rear gallery booth and four on the floor at the base of the theater. (In a permanent installation, those four would be hidden within the cove.) The image produced had a reflectance level of just under 4 foot-Lamberts and a contrast ratio of 2,000:1. An Xpand 3D system using active LCD shutter glasses provided 3D capability.

E&S's Michael Daut highlighted the complexity of the installation: each of the ten projectors was fed signals from four image processors, each producing an HD image, via fiber optic cable. The 40 processors were kept in sync by a dedicated proprietary TrueSync computer. Several cameras inside the dome monitored the alignment and blending of the images, keeping them perfectly blended and consistent, also with proprietary E&S software and hardware.

An advantage of the Christie Mirage projectors used in the Toronto demo is that they use multiple UHP lamps rather than a single, expensive xenon lamp. Fail-

*(see **GSCA** on page 6)*

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Servers for GS Cinema

More, Better, and Faster Pixels

by Alen Koebel and Gord Harris

When experiencing the stunning images provided by giant-screen cinemas, it is easy to see how the venue's screen and projection equipment contribute to the quality of the final result. How the *source* of the images you see and the sound you hear — the server — affects that quality is perhaps not so obvious. The server is the ultimate behind-the-scenes player, its success measured by the degree to which its exact operation is invisible to the audience.

However, the server is the true heart of the giant-screen system. The quality of the image and the sound, and hence the degree to which the audience is truly immersed in the story being told, depends greatly on the server's capabilities. This is just as true in today's conventional digital cinema and even in the home, where a drive for improved picture quality, expressed as "more, better, faster" pixels, has led to 4K, high dynamic range (HDR) and high frame rate (HFR). To the extent that these technologies are being implemented in homes and multiplexes, they drive consumer expectations for improved image

*(see **SERVERS** on page 11)*

Premiering This Month

Mysteries of China
Voyage of Time
Extreme Weather
Jack Reacher: Never Go Back
Inferno
Conquest of the Skies
Doctor Strange
Fantastic Beasts and Where to Find Them

See page 16.

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My Documentary on IMAX Co-founder Graeme Ferguson

by Powys Dewhurst

Larger Than Life: Anatomy of an IMAX Inventor, is a documentary exploration of ingenuity and tenacity, the birth of an invention, and the life and work of **Graeme Ferguson**, the last of the IMAX inventors. It's the story of the early days of a new format, the birth of an industry, and a visionary who helped change the way we experience cinema.

We began shooting in 2013 and have received a lot of support from Graeme himself and people in the giant-screen industry on whose lives he has made an indelible mark.

Graeme, **Don Kempf**, **David Keighley**, **Douglas Trumbull**, **Stephen Low**, and many others gave great interviews. One of my favourite moments was the time spent with **Colin Low** and his wife **Eugenie** in Montreal a few months before his death earlier this year. We were fortunate to have filmed Colin's last interview. We also travelled to interview bush pilot **Fritz Meier**, who flew on ***North of Superior*** (1971) and other early IMAX films.

Greg MacGillivray gave a fun and insightful interview at the 2016 **Giant Screen Cinema Association** conference, and afterward, he told people that I was "the best interviewer" he had ever met. That was very generous, but I'm not sure it's accurate, or if I can live up to it. (He may have had a couple drinks in him when he said it.)

Toni Myers, **Dr. Janine Marchessault** (Professor of Cinema and Media Studies at York University in Toronto), **Jonathan Barker**, and others have given terrific counsel and guidance. Toni was with Graeme from the ground floor and has seen all the transitions over the last 50 years. She pioneered the format with Graeme in a phenomenal way, and if her latest film, ***A Beautiful Planet*** (2016), is any indication, she's not done yet.

Three key interviews I hope to get are Hollywood filmmakers **Billy Friedkin**, **Chris Nolan**, and **James Cameron**. All have been champions of the format, and I've followed their careers for some time, especially Cameron.

If you don't know about Friedkin's connection to IMAX, as Graeme tells it, Friedkin went to the 1974 World's Fair in Spokane, site of the fourth IMAX theater, where he saw Graeme's ***Man Belongs to the Earth*** (1974). Friedkin was at the peak of his powers, having just made *The French Connection* (1971) and *The Exorcist* (1973), and he told Graeme he wanted to make the first 15/70 feature. It didn't happen, of course, but I'd love to hear the story from Friedkin and get his impressions his giant-screen ambitions back then.

In Memoriam: Ben Brunkhardt

Filmmaker and inventor **Ben Brunkhardt** died on Aug. 30 after "a brief illness," according to a published obituary. He was 41.

Brunkhardt came to the notice of the giant-screen community in 2004, when he and director **Erik Courtney** made ***Persistence of Dreams***, a short student film recreating the assassination of Abraham Lincoln, which they filmed in Ford's Theatre with a 15/65 film camera. It was the only time such a reenactment has been filmed in the actual location. (*See article in LF Examiner, September 2004.*)

The project was a proof of concept for Large Format Negative Repurposing, a process he developed and patented in which a master shot captured on a 15/65 negative could be scanned and blown up to create multiple close-up and medium shots.

Brunkhardt earned a Bachelor's degree from the University of Southern California and a Master's from UCLA. *Persistence of Dreams* was his thesis for the latter. He subsequently contributed to **MacGillivray Freeman Films**' ***Arabia*** (2010), and was assistant camera on the concert film *Justin Bieber: Never Say Never* and *In the Picture*, the 2012 short that was the first film in 50 years to be shot with the three-strip Cinerama camera (*see Shorts, February 2012*).

A memorial service was held on Oct. 8 in Overland Park, KS.

Ben Brunkhardt filming Persistence of Dreams *in 2004.*

My background

As a kid in Barbados I was a geek and somewhat of an introvert, and maybe I still am. Discovery, reading, movies, and the sea were everything to me. We didn't have IMAX, but while most of my friends had dates on a Friday night, I was captivated by the local observatory and drive-ins. Always the drive-ins.

When I was 8 or 9, that massive Roodal's drive-in screen in Barbados was immersive enough to convince me that what was on screen was indeed real. And I was small enough to be sucked into those worlds. I often coaxed my parents to the drive-in and, to their credit, they humoured me. When the drive-in wasn't possible, I watched horrifically dubbed VHS tapes of everything from Jerry Lewis movies to *2001: A Space Odyssey, Star Wars,* and *A Clockwork Orange* (which was a mistake at age 10).

When I got to Canada at 18, I went to film school and worked in the industry with my mentor **Kim Derko**, CSC. The years 1992–1995 were a landmark period for me. **Ontario Place**'s **Cinesphere**, the first permanent IMAX theater, ran *Lawrence of Arabia* for the film's 30th anniversary in 1992, and I had to see it. I had no idea what IMAX was at the time, but that led me to screenings of **George Casey**'s ***Africa: The Serengeti*** (1994) and Greg MacGillivray's ***The Living Sea*** (1995).

Powys Dewhurst

Powys Dewhurst (r) interviewing Graeme Ferguson.

Since then, I have worked as a cameraman in Canada, Kenya, East Africa, and the Caribbean, where I worked on contract for the Dominican Prime Minister's office. As a photojournalist and writer I've been commissioned by *Wired* magazine and been published in the *Toronto Star*, the *Los Angeles Times*, *Saturday Night,* and other publications.

While I certainly can't approach Graeme's achievements, I have enjoyed noting a few similarities I share with him. We are both cameramen, both had some film schooling, both enjoy the sea, and we were both chosen to represent Canada with our work at an expo: Graeme at **Expo '67** in Montreal and me at Expo 2010 in Shanghai, China.

About the film

This is an important and special story to me, but it's not primarily about the technology. It's the same reason I find Preston Tucker and Howard Hughes fascinating: they challenged the world to try something different and aim for something new.

I've learned a great deal along the way. Graeme's generosity and humility are profoundly endearing. In the late 1990s, Don Kempf, founder of **Giant Screen Films**, had no experience in cinema, but wanted to make ***Michael Jordan to the Max*** (2000). He recounts being stunned by how much Graeme backed him in getting the film made. There are many other stories like this.

Most people don't realize that IMAX and perhaps giant-screen cinema itself might not exist if not for the Cold War. In 1960, the Soviet Union was awarded the 1967 World's Fair, which would have happened during the 50th anniversary of the 1917 Russian Revolution. But two years later, the USSR turned it down over financial and security concerns. The fair was awarded to Canada, and IMAX was birthed out of the challenges faced by two creative men — Graeme and **Roman Kroitor** — who were tasked with making innovative cinema experiences for Expo '67 in Montreal.

It's funny to think that the only reason we got to see *North of Superior,* ***To Fly!*** (1976), and ***Space Station 3D*** (2002) was because of the Cold War and the Cuban Missile Crisis.

Coming to this project, I initially felt a bit like an outsider. The giant-screen world seemed like a sort of private club. I only had my respect for this creator and my enormous love of immersive cinema and film history as my motivation. But I have been welcomed and supported by many people in many ways.

I've always respected the fact that many giant-screen films start out with someone's personal investment. Pioneering filmmakers like Stephen Low and Jonathan Barker have taken leaps of faith in the hope that everything will work out, and they have succeeded far more often than not.

We're filming this documentary the same way. We shot the first interview with Graeme in 2013, and we've been filming it bit by bit since then. The film is a self-financed labour of love, and I couldn't do it without a terrific team of folks who have been supportive and enthusiastic along the way, like my producer and former instructor, documentary producer/director **Peter Raymont**, who was himself mentored by Roman Kroitor. I believe in sacrifice and putting in the work, but it's been fun and truly rewarding.

I want to create a documentary that both Graeme and I will be proud of. It's been an exhilarating process so far, with more to come.

Larger Than Life: Anatomy of an IMAX Inventor *will be released in late 2017 or early 2018 in two versions: a 39-minute version for film festivals, and a one-hour version for television. It will also be screened at Ontario Place's Cinesphere.*

Powys Dewhurst is a filmmaker, photojournalist, and writer based in Toronto. He can be reached at powdew@yahoo.com.

IMAX Q3 results

On Oct. 20, **Imax Corporation** announced its financial results for the quarter ending Sept. 30, 2016. The company reported a profit of $2.5 million ($0.04 per share) on revenues of $86.6 million, compared to $8.6 million ($0.12 per share) on revenues of $85.1 million in the third quarter of 2015. For the nine months ending Sept. 30, Imax showed a profit of $19.8 million ($0.29 per share) on revenues of $270.4 million in 2016, compared to $33.4 million ($0.46 per share) on revenues of $254.5 million in 2015.

Imax signed agreements for a record 162 new theaters in Q3 (including the 150-screen deal with China's **Wanda** chain, *see The Biz, Summer 2016*), up from 35 in 2015's Q3. The company installed 50 theaters in the quarter, compared to 44 in the same quarter of last year. The backlog as of Sept. 30, 2016, stands at 547, compared to 384 a year ago, and the number of installed IMAX theaters at the end of the quarter was 1,145, of which 1,037 are multiplex screens. The number of IMAX laser theaters stands at 33.

Imax film and theater deals

In October, **Imax Corporation** announced new theater and film deals, as well as new appointments to its board of directors.

Les Cinémas Gaumont Pathé signed a deal to add five IMAX theaters to locations in France, four of which will be laser systems. In addition, its IMAX theater at **Gaumont Disney Village** near Paris will be upgraded to laser. The deal brings to 22 the total of IMAX screens Gaumont operates or has contracted for in France, the Netherlands, and Switzerland, and makes it the second-largest IMAX exhibitor in western Europe.

Imax has partnered with **Disney/ABC** and **Marvel Television** to premiere AMC's new TV series, *Marvel's The Inhumans* exclusively in IMAX theaters in September 2017, before the show's broadcast opening. A version of the first two episodes, shot with IMAX digital cameras, will run in IMAX theaters worldwide in the first two weeks of September, a typically slow time for multiplex IMAX screens.

Warner Bros. Pictures will release up to 12 new titles to IMAX theaters, including ***Kong: Skull Island*** (March 10, 2017), ***Blade Runner 2049*** (Oct. 6, 2017), ***Tomb Raider*** (March 16, 2018), **Steven Spielberg**'s ***Ready Player One*** (March 30, 2018), and ***Godzilla*** sequel (2019), in addition to previously announced entries in the **DC Comics** franchises.

Twentieth Century Fox has extended its partnership with Imax by adding four new titles: ***Maze Runner: The Death Cure*** (Jan. 12, 2018), ***The Predator*** (Feb. 9, 2018), ***Alita: Battle Angel*** (July 20, 2018), and an untitled **Marvel** film.

Finally, the company announced that it has added **Kevin Douglas**, founder of **Douglas Communications**, and **Greg Foster**, CEO of **Imax Entertainment**, to its board of directors. The new appointments, and the retirement of a former director, bring the board's membership to 11. Douglas is the largest individual shareholder in the company; Foster has been with Imax since 2001.

D3D's Birdly flight-simulating VR system.

D3D's VR system, theater deals

D3D Cinema has announced a deal to market a flight-simulating, virtual-reality (VR) system, and two new conversions of GS theaters to digital.

D3D has partnered with **Somniacs**, based in Switzerland, to distribute its Birdly VR systems to museums, zoos, and science centers in North America. The system, demonstrated at the **Giant Screen Cinema Association**'s trade show in Toronto last month, allows users to fly through virtual cityscapes and landscapes by lying on a motion base with arms outstretched, and intuitively altering their path by flapping and moving their arms like wings. A headset with 3D displays and audio, plus a fan simulating headwind, coupled with the motion of the base in three degrees of freedom, creates a compellingly realistic flying experience.

In September, D3D converted the theater at the **Arizona Science Center** in Phoenix to dual **Barco** 4K digital projection, removing the two IMAX SR film projectors that had been installed in the 285-seat theater in 2006. The theater opened in 1997 with an Iwerks 8/70 projector.

In August 2017, Pittsburgh's **Carnegie Science Center** will remove the 15/70 film projector and the projection dome from its **Rangos OMNIMAX Theater** and convert the space to a flat-screen GS theater with 3D 4K Christie laser projection installed by D3D. The new projection screen will be at least 70 feet (21 meters) wide. The installation will include a **Dolby** Atmos multi-channel sound system, one of the first to be placed in an institutional theater. The theater opened in 1991 with a 79-foot (24-meter) dome and 350 seats.

The switch from dome to flat screen is part of a larger campaign to substantially expand and improve the 25-year-old facility, planning for which started in 2009. Management decided that a flat-screen venue would offer a different immersive experience and greater programming flexibility, and better complement the 75-year-old **Buhl Planetarium** at the heart of the center. The Buhl features a 50-foot (15-meter) dome equipped with a **Sky-Skan** Definiti fulldome system.

The $2 million project to convert the Rangos will start next August and be completed by the end of the 2017. The full expansion project will be complete in the spring of 2018.

Somniacs

See also the item on the D3D/Christie laser dome system on page 24.

K2 distribution deals

In September, **K2 Communications** made a deal with **3D Entertainment** to distribute the latter's portfolio of seven giant-screen films, including its own original productions such as ***Ocean Wonderland 3D*** (2003) and ***Jean-Michel Cousteau's Secret Ocean*** (2015), as well as co-productions such as ***Sea Rex 3D*** (2010) and ***Air Racers 3D*** (2012).

In a separate deal, **N3D Land**, producer of ***D-Day: Normandy 1944***, has selected K2 to distribute the 44-minute GS documentary about the climactic battle of World War II, also previously distributed by 3D Entertainment.

Connecticut to take Norwalk IMAX

The state of Connecticut has confirmed that it will take, and probably demolish, the IMAX Theater at the **Maritime Aquarium at Norwalk** to make way for the rebuilding of a railroad bridge that passes directly over the aquarium building.

As we reported last month, the Walk Bridge is a 120-year-old swing bridge that carries 125,000 passengers a day along the busy New York-Boston corridor, and is badly in need of replacement. The IMAX theater, 25 feet (7.6 meters) from the bridge, cannot remain in place while the new bridge is built.

The aquarium plans to build a replacement theater elsewhere on its property, on a site still to be determined, and officials hope that construction can start well before the existing theater is torn down. **Brian Davis**, president and CEO of the aquarium, told local media that "we cannot afford to have the theater down months or years. It's not even an option for us."

The new theater will allow the aquarium to switch to digital projection, replacing the IMAX GT film projector that was installed in 1988. Spokesman **Dave Sigworth** said, "It could be IMAX, it could be a 4D theater."

With 500,000 visitors a year, the Maritime Aquarium is Norwalk's most popular attraction.

Cosmic Picture, Tribal Planet deal

GS production company **Cosmic Picture** has partnered with **Tribal Planet**, a mobile app developer, to use Tribal's Citizen Science app to support Cosmic's next film, ***Einstein's Incredible Universe***. The app will allow viewers of the film to "engage with curated Einstein activities on their mobile device[s]," according to a press release. Tribal will also work with Cosmic to obtain brand partnerships for the film.

Einstein's Incredible Universe explores the scientist's theories "and the puzzles that ignited his imagination at a young age." It is set to go into production next year for a release in 2019.

Brandino retires

Pat Brandino has sent an e-mail to friends and colleagues announcing her retirement as VP for North American distribution at **3D Entertainment**, where she worked for eight years. Before that she was managing director of **Mind's Eye Entertainment** for two years, and before that she handled film distribution for **Destination Cinema** from 1998 to 2005. Concurrent with her departure, 3D Entertainment's film library is now being distributed by **K2 Communications**. (*See item above.*)

Pat Brandino

She writes that "it has been truly wonderful to have served" in the GS industry and says she expects to keep busy at her home in Victoria, BC, with her seven grandchildren.

Bretherton's future

With the closing of the **IMAX Theatre Sydney** last month (*see The Biz, September 2016*), its CEO and director, **Mark Bretherton** tells *LFX* that he is planning to take a "long break into the early part of 2017." Saying that he "fully hope[s] to remain in the industry," he is looking into a few opportunities, "but it is too premature to make any announcements." He adds that his relationship with the Sydney theater's owners is good, and that he may "have an involvement with the new theater" when it opens in the new building in two years.

Cripps leaves Imax for Fox

Andrew Cripps, president of Imax for Europe, Middle East, and Africa, has been hired by **Twentieth Century Fox** as its president of international distribution, effective in January. Cripps joined Imax in 2012 and helped manage the expansion of the company in that region. At Fox, Cripps will report to Fox Film chair and CEO Stacey Snider, and will work on local-language production and distribution opportunities.

Andrew Cripps

Dehmel replaces Groves at Imax

Craig Dehmel has been named EVP and head of global distribution at **Imax Entertainment** and SVP at **Imax Corporation**, where he will report to **Greg Foster**, CEO of Imax Entertainment. He succeeds **Phil Groves**, who left the position on Oct. 1 to produce ***Asteroid Impact***, Imax's next GS documentary.

Craig Dehmel

Dehmel comes to Imax from **Twentieth Century Fox Filmed Entertainment**, where he was EVP for international distribution.

The 2016 GSCA Conference in Toronto

*(from **GSCA** on page 1)*

ure of a single UHP lamp, which can be replaced for a few hundred dollars, does not shut down the projector, and can be compensated for by the auto-alignment system. Laser-illuminated projectors, which are virtually immune to such failures, could also be used in the E&S system, although at higher initial expense.

The demo included the second side-by-side comparison of 15/70 film with digital fulldome projection on a dome. (The first was at the **Science Museum of Virginia** in the fall of 2014, using an E&S 6.5K system. (*See Oct.-Nov. 2014.*) **FotoKem** prepared new prints from original negatives and used archived 8K scans of two classic GS films, ***Alaska: Spirit of the Wild*** (1997) and ***Jerusalem*** (2013). Each was shown first in film, then digitally, then in a split screen, with film on one side and digital on the other.

The consensus of several attendees who spoke to *LF Examiner* was that the quality of the digital images matched that of 15/70 film, and provided a superior overall experience because of the higher frame rates possible. While 15/70 film remains at the 90-year-old standard of 24 fps, most fulldome systems can run at 60 fps, and the demo system was capable of 120 fps.

The next portion of the demo featured high-resolution content captured digitally. **Michael Dalton-Smith**, who is directing ***Volcanoes: Land of Fire***, showed 8K clips shot at Niagara Falls, created by stitching together images from two cameras, which yielded images with the 4:3 aspect ratio characteristic of GS film. (The native aspect ratio of most digital cinema cameras is the wider 1.85:1.) He also showed dramatic footage from his *Volcano* film, including impressive aerials from a 4K **DJI** Phantom 3 drone system that costs less than $10,000.

Peter Chang of **Golden Gate 3D** ran footage shot for his GS film ***Cuba***. Many examples were time-lapse scenes captured with digital still cameras that offer higher resolution than current cinema cameras The **Phase One** XF 100MP is a pro-quality digital SLR with a removable imaging back that has 101 MP resolution: 11,608 x 8,708 pixels. He has also used the **Sony A7R2**, with a native resolution of 7,952 x 5,304 pixels. For full motion shooting, Chang has used the latest cameras from **RED**, the Helium and the VistaVision, which shoot at 8K. Chang is also experimenting with high dynamic range (HDR) capture.

Martin Howe at the Evans& Sutherland 8K dome demo at the Ontario Science Centre.

Pierre Routhier of **Digital Troublemaker** presented a demonstration of footage shot at 120 fps using a 4K RED Epic camera. Captured with different prime lenses — 18mm, 28mm, and 50mm — and varying pan rates, the material showed how blurring and strobing during camera moves is reduced or eliminated at 120 fps. He said that for giant-screen filmmakers and theaters, the question is "where we go moving forward, knowing ultra-high-def at home is 60 [fps] 4K, knowing that virtual reality is starting at 90, video games are 120? Where do we want to set the standard [for the giant-screen experience]?"

Impressions

Robin Doty, manager of OMNI and 3D theaters at Boston's **Museum of Science** said that the E&S system's images were "excellent," adding that "[it] looks like the jury is in on the image quality point." **Manos Kitsonas**, technical director for the **Eugenides Planetarium** in Greece, said that "The digital images stood [up] very well next to the film in such a big dome."

A theater director with experience in both film and digital domes (who asked not to be identified), agreed that the system's image quality was excellent, but expressed concerns about the overall life of any digital system (not only the E&S). Unlike 15/70 film projectors, some of which have operated nearly unchanged for 40 years, digital systems may have to be replaced or seriously upgraded in as little as five to seven years.

Doty said that with the image question laid to rest, his only remaining issue is the cost of the digital replacement. E&S's **Michael Daut** said the system was "surprisingly affordable," but declined to be more specific, since pricing would vary for each specific configuration.

What is known, thanks to Virginia's open public records laws, is that the Science Museum of Virginia paid about $1.6 million for the five-projector E&S 6.5K system installed in 2014. (Although this number establishes a baseline, readers are cautioned not to assume that a system with twice as many projectors would necessarily cost twice as much. Too many mitigating factors come into play to draw such a facile conclusion.)

Martin Howe presented at the 8K dome demo at the Ontario Science Centre.

Alternative content

Kim Nickels, formerly with the **Putnam Museum** in Davenport, IA, and **Chris Hurtubise** of **COSI Columbus** in Ohio, led a professional development session on Alternative Content, assisted by **Mark Katz** of **Giant Screen Films**. Nickels explained that with the spread of digital projection, theaters have many more options for programming than just 40- or 20-minute documentaries and current Hollywood features. The new options include older Hollywood films, live concerts, streaming operas or ballets, and even such specialized events as live streamed surgery.

Three case studies were presented. Illinois' **Peoria Riverfront Museum** ran a special screening of Jon Stewart's debut as a feature film director, *Rosewater*. The film, which had not been booked at any other theaters in town, was screened, after which the real-life subject of the story, journalist Maziar Bahari, participated in a live question and answer session with the audience from London via Skype.

The goals of the program included recouping the modest film rental cost, to reach new audiences, and to "promote the Museum as a place that fosters intelligent and meaningful discussion." The museum hoped to reach "adults and young adults with an interest in global issues," and worked with the Peoria Area World Affairs Council to promote the event through social media and e-mail.

The event more than met its financial goal, selling 180 tickets at $10 each, 93% of the capacity of the house, and took in more from concession sales that included alcohol. Other benefits included establishing the new partnership with the World Affairs Council and demonstrating the theater's capabilities to the community.

In September 2014, the Putnam Museum used its **National Geographic Giant Screen Theater** to host the premiere of *River to River: Iowa's Forgotten Highway 6,* a documentary by local filmmakers. The screening featured a Q&A session with the filmmakers and coincided with the "River to River Retro Road Trip," an annual event celebrating Iowa's historic Route 6. The target audience — people participating in the tour — sold out the 270-seat theater at $8.50 per seat, the proceeds from which were split 50/50 with the filmmakers. The show garnered free press attention for the theater and brought local and regional tourism professionals to the museum.

Omniversum is a 296-seat IMAX Dome theater in the Hague, Netherlands, that has been operating since 1984. Once a year the theater hosts "Pink Project," a Pink Floyd cover band, to play five shows in three days. The band picks two films from the theater's library and times the songs they play to the films, rehearsing for a couple of months in advance. The goals of director **Berend Reijnhoudt** are to sell out the shows, "amaze and delight audiences," and bring in new audiences to see the films. The theater and the band both market the event through their social media sites, and the theater uses its e-mail list and Web site.

The five shows do sell out, grossing a total of over €34,000 ($36,000), the net from which is split 70/30 between the band and the theater. The theater also earns about double the usual concession income of a normal evening.

The event is fun for all, including the theater staff, the band and audience are grateful, and the theater makes some money, although Reijnhoudt says they would do it even if they didn't.

Hurtubise then moderated a panel discussion with five GS professionals.

Paul Wild is theater director at **IMAX Victoria** in which opened in Canada's **Royal British Columbia Museum** in 1998. It converted to IMAX laser in March 2016. Wild said he runs mostly documentaries, and not much alternative content, except for second-run DMR films, and the **Fisheye Project**, which streams live footage from scuba divers.

Tina Ratterman is president of boutique distributor **BIG & Digital**, which distributes GS and non-GS films. She described herself as an advocate for alternative content, saying it "builds buzz" and helps generate promotions.

K2 Communications has been in the GS business for 20 years. Its president, **Mark Kresser**, thinks of it as a studio: pro-

*(see **GSCA** on page 8)*

*(from **GSCA** on page 7)*

ducing, distributing, and marketing content for the GS industry. It holds the largest library of TV and ancillary rights to GS films and footage. He urges theaters to "stick to the core market" of GS films, and limit alternative content to after hours.

Brad LaDouceur is vice president of Event Cinema for Canada's **Cineplex** chain, which has been programming alternative content for 17 years, starting with WWC wrestling and adding the Metropolitan Opera in 2005. Cineplex now has many dedicated screens that run event cinema seven days week.

Kate Storm has been director of theaters at COSI Columbus since 2014, when its planetarium reopened with a new fulldome system after a ten-year hiatus. The museum also has a digital GS theater, and programs alternative content in both, including seasonal movie series, live and recorded music concerts, lectures from Ohio State University, and video gaming.

MacGillivray Freeman Films' National Park Adventure *won five GSCA awards.*

Photo by Richard Hoffmann. © 2016 by GSCA.

Awards presentations

The GSCA presented its annual awards during the conference. In addition to the usual film and marketing awards, the association gave its first Outstanding Achievement award to filmmaker and Imax Corporation co-founder **Graeme Ferguson**.

Ferguson needs little introduction to anyone involved in the giant-screen industry. From 1968–1970, he co-invented the IMAX 15/70 film format with fellow filmmaker **Roman Kroitor** and engineer **Bill Shaw** and founded the company that would become **Imax Corporation** with Kroitor and businessman **Robert Kerr**. Since the first IMAX film, ***Tiger Child*** in 1970, Ferguson has directed, produced, photographed, or written 17 giant-screen films. His credits also include numerous non-IMAX documentaries for the **National Film Board of Canada** and directing and/or writing two feature films. In 1986 he won the Genie Award for "Outstanding Contributions to the Canadian Film Industry." (A documentary film about Ferguson is in production. *See article on page 2.*)

As host of the first part of the ceremony, Imax's **Mike Lutz** touted the success of several theaters that have installed the IMAX laser projection system, saying that box office at IMAX Victoria in Canada is up 20%; at the IMAX theater at the **Tennessee Aquarium** in Chattanooga it's up 40%; Science North, in Sudbury, ON, is up 43%; and at Germany's **Sinsheim Auto & Technik Museum**, box office is up 61% since installing the laser system.

Among the film awards, one title, ***National Parks Adventure*** from **MacGillivray Freeman Films**, won in five categories: Best Film, Short Subject; Best Cinematography; Best Sound Design; Best Original Score; and Best Marketing Campaign by a Distributor.

Best Film for Lifelong Learning went to Imax's ***A Beautiful Planet***.

Best Visual Effects was presented to ***Space Next***, produced by **Afterglow Studios** and distributed by BIG & Digital.

Best Film, Feature Length was won by **LucasFilms'** ***Star Wars: The Force Awakens***, distributed by **Walt Disney Studios Motion Pictures**.

Best Film Launch by a Theater was won by both the **Cincinnati Museum Center** and the **Tennessee Aquarium**, for their launches of MFF's *National Parks Adventure*

Best Theater Marketing Campaign went to the **Hollywood Megaplex PlusCity** in Austria.

The Big Idea Award, given for the most original and effective idea of a single marketing campaign, went to the **Montreal Science Centre** for its promotion of ***Living in the Age of Airplanes***. With no budget to promote the film, the Centre's marketing team partnered with the aviation industry to create a successful campaign and film launch.

The Big Shoe award recognizes exemplary volunteers to the GSCA. This year's recipients were **James Neihouse**, ASC; **Cherie Rivers**; and **IMAX Post/DKP Inc.**

Imax Corporation also presents its Maximum Image Awards during the ceremony. The IMAX Hall of Fame Award goes to a giant-screen film that is at least ten years old, selected by vote of the IMAX theater network. This year's inductee was ***North of Superior***, 1971, produced by Imax Corporation and directed by Graeme Ferguson.

The Best IMAX Booth award went to **IMAX Melbourne, Melbourne Museum** in Australia, and Odeon Wimbledon and IMAX in the United Kingdom.

Our coverage of the GSCA conference will conclude in the December issue.

Space constraints precluded listing all New Film and Films in Development here. They will be included in the December issue.

Films in Production at the 2016 GSCA Conference

Amazon Adventure

SK Films, Inc.
Release Date: 4/30/2017
Format: 3D
Length: 40 min.

Amazon Adventure tells the exciting story of Henry Bates' fascinating 11-year journey through the perilous Amazon rainforest as a young man who risks his life for science. As in any great detective story, audiences will experience the compelling clues Bates unearths in his major discovery of the phenomenon of "Batesian" mimicry, whereby certain animals develop the look of others and thus can deceive predators and prey — all unfolding in the visually stunning and bio-diverse Amazon. Although unknown to the general public, Bates made crucial contributions to evolutionary biology. While identifying 8,000 species new to science, he discovered the "beautiful proof" for what is widely considered the most important explanation of the development of life on Earth — natural selection. With a team of over 100 scientific and historical advisors, *Amazon Adventure* has undergone unparalleled research to ensure accuracy and bring this incredible story to life on the giant screen.

America's Treasures

MacGillivray Freeman Films, Inc.
Release Date: 2/28/2018
Format: 3D
Length: 40 min.

Jazz, blues, zydeco, old-time country music and many other variations on America's musical heritage are at the heart of America's Treasures, a giant screen film celebrating America's vibrant cultural, artistic and musical treasures that reflect the diversity of our nation. Join a group of emerging musicians and discover the colorful locales and cultures where their music is born. Travel up the Mississippi Delta, the birthplace of jazz and blues, and explore the genre's evolution into Motown, hip- hop, and rap. Discover the roots of bluegrass, country, folk and more from Nashville to the Wild West. Jam with rockers and pop stars on the West Coast and dance all night at an electronica festival. America's Treasures is a musical ride that will have you singing and dancing across the nation. Available February 2018.

Ancient Caves

Oceanic Research Group
Release Date: 11/1/2017
Format: 2D
Length: 40 min.

A small team of divers descends into a deep underwater cave in the Bahamas. There is no light. The only way home: a string. They have just enough air to complete their mission, the retrieval of an ancient data sample recorded by nature eons ago during an ice age. *Ancient Caves* takes the audience on a journey through geological time on a mission to unlock the secrets of ancient climate change. Viewers fly over the Nevada desert and down into a large crevice filled with hot water from deep inside the Earth. They swim through stunning crystal formations with world-renowned cave diver Brian Kakuk, join a team of scientific cavers in Minnesota led by Dr. Gina Moseley, and visit the gleaming clean room of cave climatologist Dr. Larry Edwards where samples are analyzed. Ancient Caves brings science and adventure together as two cave climatologists attempt solve the ice age riddle. It's possible that *Ancient Caves* is the first IMAX film in 30 years to be shot specifically for IMAX Dome theaters. Caves are an incredibly immersive environment and we are taking advantage of the dome theater to bring the audience underground and underwater.

Asteroid Impact

Imax Corporation
Release Date: 2018
Format: 3D
Length: 40 min.

Asteroid Impact will reveal the origins of asteroids and the effects of previous Earth impacts. Delve into the threat these celestial masses pose to our planet today, and examine how we monitor their trajectory in order to stay out of their deadly path. Through a tour of the solar system and a close look at the "city-buster" asteroid, Apophis, this new IMAX documentary will tell you everything about the massive space rocks that shape our universe through amazing and devastating collisions.

Best NFB Animated Shorts

National Film Board of Canada
Release Date: 3/31/2016
Format: 2D
Length: 25 min.

Compilation of the National Film Board's best animated shorts. For all ages. Sunday: This Oscar-nominated animated short is a magical tale about life as seen through the eyes of a child. *The Necktie:* A mixture of puppet and hand-drawn animation, *The Necktie* is the story of Valentin and his quest to find meaning in his life. Stuck in a dead-end job, he has forgotten all about the things that used to bring him joy. *Carface:* In this short animated film, a Chevrolet Bel Air 1957 offers an ironic take on the iconic American ballad "Que Sera, Sera (Whatever Will Be, Will Be)." The Chevy's bumper transforms into a pair of seductive lips, from which emerge the song's reassuring lyrics, while a choir of cars performs a breathtaking dance number in the background. As one of the world's most acclaimed creative laboratories, the National Film Board produces and distributes a wide spectrum of distinctive, relevant and innovative audiovisual productions. With a reputation for breaking new ground in both the form and content of animated films, documentaries, multiplatform digital projects, and more recently, fulldome films and virtual reality, the NFB is taking a selection of their best animated films to the big screen for the first time.

Cuba

Golden Gate 3D
Release Date: 7/31/2017
Format: 3D
Length: 40 min.

Cuba tells the powerful story of a land preserved in time, a country poised on the cusp of dramatic change. The vibrant culture, meticulously maintained colonial architecture, and pristine ecosystems all provide a profound window to the past. Cuba will transport audiences across breathtaking island landscapes, taking them from groundbreaking scientific exploration beneath the Caribbean Sea to streets filled with music and dance in the heart of Havana. Through the eyes of Cuban artists, historians, and scientists, audiences will have a rare chance to see this amazing country at a pivotal time in its history. Filmed for the first time in 3D and exclusively for the giant screen, the film will reveal why Cuba continues to stir the imagination of the world.

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Dino Dana: Journey to the Center of the Herd

Sinking Ship Entertainment
Release Date: 7/31/2018
Format: 3D
Length: 40 min.

Nine-year-old Dana is ecstatic when she is invited to join a dinosaur dig by one of her paleontological heroes. After much begging, Dana's family heads out west on a cross-country road trip in Dad's old RV. Dana is amazed to discover they are keeping pace with a giant migrating dinosaur herd filled with herbivores of all shapes and sizes. Thanks to the power of her transforming dinosaur backpack, Dana uses every pit stop as an opportunity to join the herd and learns the herbivores are being tracked by several carnivore packs. When Dana saves a baby Edmontosaurus from a hungry T-rex, she gets separated from her family and has to rely on the dino herd to get back to them. In this action-packed family adventure, Dana has the dino-experience of a lifetime and solves one of her most important experiments: what lies at the centre of a dinosaur herd?

Dinosaurs of China

Saint Thomas Productions
Release Date: 2017
Format: 3D
Length: 40 min.

On the green slopes of giant volcanoes lives Microraptor. Not a bird, nor a normal dinosaur: with four wings, this small, feathered dinosaur glides between trees in search of lizards or insects to feed its young. Being tiny exposes it to various threats from its neighbors: on the ground, Sinosauropteryx — a squirrel version of Velociraptor — and the massive Yutyranus — a sort of feathered T-Rex — roam in search of dinner. Highly exposed on the ground, Microraptor can only climb trees to escape. Its neighbors have other strategies: primitive mammals rely on dens to hide in and poisonous heel spurs to inflict deadly wounds; colored Caudipteryx — a peacock version of a small Velociraptor — or "Pyjama raptor" — another fluffy raptor — have to run through the maze of trees to confuse their predators. Every minute, Microraptor battles to survive: Darwinopterus pterosaurs attack through the canopy, winter brings snow and volcanoes spew deadly clouds of ashes. Will Microraptor thrive long enough to give its chicks a chance to flee and venture out of their nest?

Doctor Strange

Marvel Studios
Release Date: 11/4/2016
Format: 3D
Length: 120 min.

After a tragic accident, world-renowned neurosurgeon Doctor Stephen Strange must put ego aside and learn the secrets of a hidden world of mysticism and alternate dimensions in order to defeat dark forces beyond reality as we know it.

Dunkirk

Warner Bros.
Release Date: 7/19/2017
Format: 2D
Length: 120 min.

Allied soldiers from Belgium, Britain, Canada, and France are surrounded by the German army and evacuated during a fierce battle in World War II. Co-produced, written, and directed by Christopher Nolan

Fantastic Beasts and Where to Find Them

Warner Bros.
Release Date: 11/18/2016
Format: 3D
Length: 120 min.

Fantastic Beasts and Where to Find Them opens in 1926 as Newt Scamander has just completed a global excursion to find and document an extraordinary array of magical creatures. Arriving in New York for a brief stopover, he might have come and gone without incident…were it not for a No-Maj (American for Muggle) named Jacob, misplaced magical case, and the escape of some of Newt's fantastic beasts, which could spell trouble for both the wizarding and No-Maj worlds.

Fish Eye Project

Fish Eye Project
Release Date: 2018
Format: 2D
Length: 40 min.

Imagine your audience can go diving in real time without getting wet. Have the opportunity to ask questions, interact with marine scientists online and have the chance of their questions being answered by the onsite dive team *live*. Welcome to live interactive cinema, a real--time adventure like never before. June 8, 2016, Emerald Forest, marked the first live underwater interactive production and was shown in three giant screen theatres and two smaller theatres across Canada. The production reached hundreds in theatres and thousands online, prompting Fish Eye Project to launch a production calendar of international dive sites. With Fish Eye Project, theatre-goers receive an immersive experience as they embark on live underwater expeditions to spectacular marine environments such as the infamous Great Barrier Reef, running wild with salmon, explore iconic shipwrecks or swim with a giant Pacific octopus off the coast of Canada. This is live interactive alternative content and a different production is planned every two months.

Full Charge: The Power of Innovation

N3D Land Films
Release Date: 2017
Format: 3D
Length: 40 min.

Using immersive cinema techniques, including traditional animation and spectacular aerial shots, *Full Charge* brings to life the story of electricity. From the first spark created by man's hand, through the age of "miracles" to the first power plants, through the industrial revolution to present day applications. We follow the stories of pioneers, scientists, and inventors driven by curiosity and innovation: from Benjamin Franklin's kite to Solar Impulse, the first solar-powered plane capable of perpetual flight. Today, electricity is indispensable. As the energy of choice for innovators, electricity will power our future...as long as it can be produced in a clean and sustainable way. *Full Charge* examines how renewable energy can help us fight global warming without harming our quality of life…on the contrary! Audiences will have fun as we spark their imaginations and discover how the greatest forces of nature can help make our planet cooler.

Greenland

Golden Gate 3D
Release Date: 2018
Format: 3D
Length: 42 min.

Greenland is the story of adventuring with a purpose, as renowned climate scientists and legendary extreme athletes voyage beyond the limits of human exploration. On this journey they will discover a singular culture, encounter unexplored summits and slopes, and uncover a scientific mystery that will impact the planet. With a thrilling story and experience crafted for the giant screen, *Greenland* will take audiences to a place that most humans will never have the chance to set foot, revealing extraordinary perspectives and immersing them in thrilling moments of adrenaline, culture, and science.

In the Wake of the Dolphin

Milbrand Cinema
Release Date: 3/31/2018
Format: 2D
Length: 40 min.

This story is about the life of an Atlantic bottlenose dolphin, a wildlife ambassador named Han Solo. One day along a beautiful coral reef, Han showed up outside a dolphin enclosure. The trainers quickly did a head count and determined none of their dolphins was missing. Interesting, outside looking in, this wild dolphin, free to swim wherever he chose wanted to be near humans and his own species. Han is special because his life has bridged two worlds, one as a wild dolphin, and the other as part of a group of dolphins under managed care. Han will be filmed inside a dolphin enclosure, swimming free with his buddies over beautiful coral reefs, sand channels and the open ocean, connecting our story and many of its inhabitants. Han will contribute to our understanding of dolphin behaviors, and he will be the hook that allows us to showcase his marine world. Kathleen Dudzinski Ph.D. is our marine science advisor and educator. Kathleen will also be shown on camera conducting science in our movie. Our giant screen audience today would remember her from the great MacGillivray Freeman Dolphins project in 2000.

Inferno

Imagine Entertainment
Release Date: 10/28/2016
Format: 2D
Length: 120 min.

Academy Award winner Ron Howard returns to direct the latest bestseller in Dan Brown's billion-dollar Robert Langdon series, Inferno, which finds the famous symbologist (again played by Tom Hanks) on a trail of clues tied to the great Dante himself. When Langdon wakes up in an Italian hospital with amnesia, he teams up with Sienna Brooks (Felicity Jones), a doctor he hopes will help him recover his memories. Together, they race across Europe and against the clock to foil a deadly global plot.

Jack Reacher: Never Go Back

Paramount Pictures Corporation
Release Date: 10/21/2016
Format: 2D
Length: 120 min.

Set four years since the first film's events, Jack Reacher is returning to the headquarters of his old military unit, but reveals that he is now accused of a 16-year-old homicide, and finds out that it is only a part of something bigger than he thought before.

Kong: Skull Island

Warner Bros.
Release Date: 3/10/2017
Format: 3D
Length: 120 min.

Following the 2014 success of the global reinvention of the *Godzilla* franchise, Legendary and Warner Bros. have come together again to create an epic, new shared cinematic franchise. It's a powerful human drama, unmissable spectacle and new vision of nature's true King. *Kong: Skull Island* invites audiences on an uncharted journey into the heart of one of the greatest myths.

Maximum Power

Master's Digital, Inc.
Release Date: 9/1/2017
Format: 3D
Length: 45 min.

What is electricity? How many people does it take to turn on a lightbulb? How much energy does it take to do a Google search? Most significantly: Are we running out of energy sources? As demand for power is ever increasing, science is examining new power sources such as solar, geothermal, wind and biomass along with the more familiar fossil fuels, hydro and nuclear. *Maximum Power* explores the physics surrounding the science of electricity from electrons and amps to volts, watts and current. The audience is introduced to the founding fathers of electricity such as Benjamin Franklin, Thomas Edison, James Watt, Nikola Tesla and many more. Maximum Power will engage audiences through amazing visuals, awe-inspiring animation and spellbinding soundscapes. Through state of the art immersive giant-screen technology, audiences are taken on an electrifying journey of discovery. Electricity might seem mysterious but once you understand the science...the light goes on.

Moby Duck

Imax Corporation
Release Date: 2018
Format: 3D
Length: 40 min.

After a huge storm batters a ship in the north Pacific, its cargo of thousands of rubber ducks is lost at sea. Years later, the ducks wash up on beaches in Alaska… and eventually around the world. The mysterious voyage of these ducks is the inspiration behind this whimsical and revealing scientific adventure. *Moby Duck* explores several interlocking threads such as: how oceanic currents work, the effects of plastic on wildlife like fish and birds, and the phenomenon of gyres and the Great Pacific Garbage Patch. It's a story about inquiry and how something as simple and familiar as a rubber ducky and can reveal natural mysteries as deep as the ocean itself.

Oceans: The Blue Planet

BBC Earth
Release Date: dsf
Format: 3D
Length: 40 min.

Oceans: The Blue Planet is an extraordinary journey of discovery and wonder, transporting the audience to the deep, mysterious worlds of our oceans. Packed with drama, awe, and spectacle, we reveal untold stories of the ocean's most astonishing creatures in immersive 3D. The scientific community has made more discoveries within the last ten years than the previous 100, expanding our frontiers of knowledge and revealing richer diversity than we could ever have imagined. From the freezing shores of the Arctic to the balmy waters of the tropics, we share these extraordinary new discoveries. Using revolutionary underwater and on-board filming technology, we'll dive into the giant void of the big blue, journey with a deep-sea current, and witness scenes of wonder from the greatest fishery on earth. In stunning 3D, *Oceans: The Blue Planet* takes the audience to magical worlds and delivers a connection to the ocean like never before.

Pondemonium

Archipelago Films
Release Date: 1/31/2018
Format: 3D
Length: 40 min.

Pondemonium is a 3D giant screen film shot in a suburban woods where humans and wildlife mingle. The film overturns convention by taking the point of view of the animals as they observe a human family living in their midst — in fleeting glimpses and snatches of conversation. The dramas and beauty of forest life are captured in rare intimacy by immersive 3D cameras — mounted inside dens and nests, moving along forest floor and pond bottom, and revealing through time lapse marvels of nature invisible to the human eye. But the modern family dwelling in the woods is blind to the real-life spectacle around it, absorbed by its array of electronic devices — until a twist of fate in the film's climax awakens them to the infinite wonders of life in the wild.

Rogue One: A Star Wars Story

LucasFilm Ltd.
Release Date: dsf
Format: 3D
Length: 120 min.

Rogue One takes you to a galaxy far, far away in an all-new epic action-adventure thriller from Lucasfilm. In a time of war, a group of unlikely heroes band together on a mission to steal the plans to the Death Star, the Empire's ultimate weapon of destruction. This key event in the *Star Wars* timeline brings together ordinary people who choose to do extraordinary things and thereby part of something greater than themselves.

Sea of Love

Achtel Pty. Ltd.
Release Date: 2018
Format: 3D
Length: 45 min.

We often overlook the presence of love in the life of sea animals — within their families, communities, schools, and friendship circles. Sea of Love explores the many ways marine animals show their love for one another. Watch underwater beings develop friendships, romantic liaisons, parental bonds, and fulfill their community duties. Whether it involves sacrifice, sharing and caring, or flirting, singing, dancing and romancing, the theme is one of attraction, attachment, and care for others. It begins where love is irrelevant — with the spectacle of mass coral spawning, the ultimate in indiscriminate coupling — but then reveals the intimate and social bonding behavior of the ocean's real lovers. Filmed with newly developed 3D underwater housing technology by a cameraman with over 15 years' experience filming underwater, *Sea of Love* offers a sharpness and quality never before experienced on the giant screen.

Soar

RPG Productions, Inc.
Release Date: 10/31/2017
Format: 3D
Length: 40 min.

Soar puts the audience in the cockpit of a high performance sailplane and takes them to places they've never been — in aircraft that are powered only by the energy of the atmosphere. *Soar* follows three stories: Lizzy Roberts, a young pilot who wants to solo on her 14th birthday as part of her quest to become a jet pilot; Jim Payne and the Perlan Project, who are building a craft to fly to 90,000, the edge of space, for scientific and atmospheric research, using the mountain wave and polar vortex phenomena to soar to a height never before attained by winged aircraft, all without the aid of engines; and Sebastian Kawa, a Polish glider pilot and nine-time World Glider Champion, as he trains in the European Alps for an attempt to regain his title in the 2016 world championships in South Africa. Both science and human experience come alive in an exhilarating, immersive experience.

Star

Spring Garden Pictures
Release Date: 2018
Format: 3D
Length: 40 min.

Star begins as a fictional story about kids in the city who see the stars for the first time. This sparks their curiosity about their place in the universe, and leads them to become sidewalk astronomers. Difficult concepts are made simple with the help of a tech-savvy grandfather, whose augmented reality glasses transform the city into a scale model of the solar system. The film crosses over into documentary as the crew takes an exciting road trip to the path of totality of the actual solar eclipse that will happen across America in the summer of 2017. Designed primarily for GS domes and fulldomes, *Star* is a real science fiction film that is a wholly original and unforgettable experience.

Volcanoes: The Fires of Creation

Digital Crossing Productions
Release Date: 4/30/2018
Format: 3D
Length: 40 min.

Volcanoes have buried towns and laid waste to civilizations. Five-hundred-fifty volcanoes are active right now. Twenty erupt every day. Yet dozens of cities and more than 200 million people live near the danger zone. A greater understanding of how these forces of nature operate is needed, desperately. Fortunately, in the last 50 years this understanding has started to emerge. In *Volcanoes* we will show the awesome power of nature and the brilliance that has unlocked its secrets. We will show how scientists learned the existence of a moving crust to unlocking proof of plate tectonics. We will take viewers on an incredible ride inside volcanoes as they erupt in natures greatest show.

Wild Bahama

Parallax Film Productions, Inc.
Release Date: 2018
Format: 3D
Length: 40 min.

Past the white sand beaches and the idyllic turquoise water, the 3,000 islands and islets of the Bahamas lay scattered across nearly 170,000 square kilometers of the Atlantic Ocean. *Wild Bahama* is the Bahamas beyond the beaches. Explore worlds where everything is eating…or being eaten, but fierce competition gives way to playful and funny creatures, just staking their claim. This a magical place where plants are sprinkled with shimmering dust and seahorses feed, almost without fear. Captured in 4K cinematography, combined with intimate aerials, extraordinary macro photography and signature "tide lapses," this is the Bahamas you've never seen before and will want to share.

Wingsuit Flyers

Grand Schema
Release Date: 2017
Format: 3D
Length: 40 min.

Soar with the world's premiere wingsuit pilots, Jeb Corliss and Joby Ogwyn, as they fly "around the world" their way, seeing incredible sights, sounds and cultures, and making epic wingsuit flights in the most spectacular locales on the planet. Humans have always wanted to fly without assistance, like winged life that called the sky home. Witness these true adventurers attempting to use their skills to defy gravity, as they fly in some of the most exotic places on the planet, including Mount Everest, Switzerland's Jungfrau rock face, Dubai's Burj Khalifa high rise, South Africa's Drakensberg, and even between New York's high rises. Audiences will have a point of view experience that will make palms sweat and give vertigo new meaning.

GS Servers: More, Better, Faster Pixels Needed

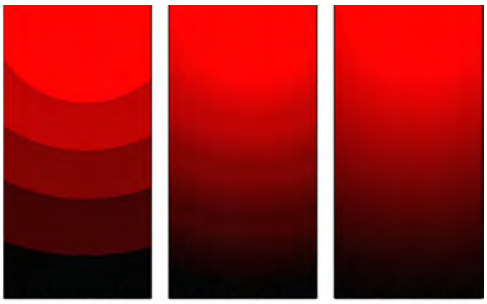


Figure 1. Color banding artifacts (exaggerated).

*(from **SERVERS** on page 1)*

quality in premium venues like GS theaters. A giant image alone is not enough.

The need for more pixels is already being addressed. Media servers and projectors capable of delivering and projecting 4K content are now commonly available at a variety of price points. Some media servers even support 8K images. The ability to combine (blend) more than one image to achieve very high resolutions on deeply curved screens, up to and including full-domes, is now also provided by a number of servers. The necessary warping and blending operations are also explicitly supported by hardware in multiple projectors, including the majority of pro-venue models from Christie Digital.

The need for "better" pixels

"Better, faster" pixels are the two most recent goals for images. There is a major push in consumer electronics for the former, which is being addressed by a number of HDR systems and by the use of both the DCI-P3 color gamut used in digital cinema and now on Ultra High Definition (UHD) Blu-ray discs, and the even larger color gamut specified in Rec. 2020 (formally ITU-R BT.2020) for UHD images. Better in this case means richer, more saturated colors, higher dynamic range, brighter highlights, and deeper blacks.

Both improvements require more bits for each color component of a pixel than have traditionally been used, in order to avoid artifacts. Legacy video systems specify only eight bits per component. This was adequate in the days when most material was captured with analog cameras, because the images contained a fair amount of noise that effectively dithered the least significant few bits. Without such dithering, computer-generated images that are inherently free of noise can exhibit noticeable contouring and "posterization," also called color banding, on eight-bit systems (Figure 1).

These artifacts are especially obvious for low-luminance portions of the image due to the non-linear response of the human visual system, which is modeled by the Barten Contrast Sensitivity function. However, they can also be obvious in areas of smoothly changing color and/or intensity even at higher luminances, such as in images of a blue sky.

These artifacts only get worse as the dynamic range grows and the color gamut increases, because the limited number of bits is spread over a larger range. Consequently, for regular movie exhibition the Digital Cinema Initiatives (DCI) spec standardized on twelve bits per component to adequately cover a very large color space known as XYZ.

While XYZ is used for encoding, most movies are actually mastered to a smaller DCI-P3 color gamut, which is still significantly larger than the gamut specified in Rec. 709 (formally ITU-R BT.709) that is used for high-definition video. Some recent movies have used the even larger gamut specified in Rec. 2020 (Figure 2). Currently it is only possible to fully achieve the Rec. 2020 gamut with RGB-laser-illuminated projectors.

As it turns out, twelve bits per component is also the specification for the only HDR system currently deployed in theaters: Dolby Vision. The peak luminance in a Dolby Vision cinema is 108 nits (31.5 foot-lamberts), just over twice the brightness of standard digital-cinema images. Just as significant, the system supports very low black levels for a total dynamic range as high as 1,000,000:1.

As a consequence of such a large dynamic range Dolby Vision specifies a very different set of opto-electronic (optical to electronic) and electro-optical transfer functions (OETF and EOTF, respectively) than the "gamma" functions that are used in traditional standard-dynamic range video systems. The Dolby Vision EOTF is called the Perceptual Quantizer (PQ) and it allows the system's very large dynamic range to be encoded without visible artifacts. It has been standardized as SMPTE ST 2084.

Consumer home movie delivery systems have also now moved beyond eight bits per component. The Rec. 2020 standard for UHD specifies at least ten bits per component, while also allowing twelve bits.

A popular HDR system known as HDR10, which is supported by the Ultra HD Blu-ray disc format and by numerous

*(see **SERVERS** on page 14)*

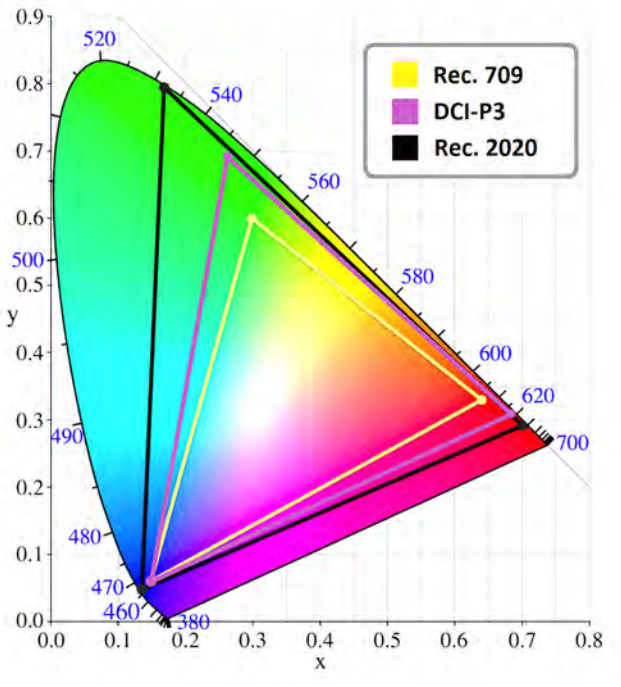
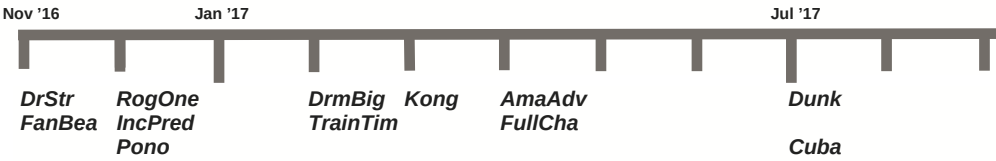


Figure 2. A comparison of color gamuts.



All films are 3D unless noted, underlined titles are 2D
* New listing.
Updated information is printed in **bold**.
Unless noted, all films run about 40 minutes.
Some titles with limited release territories are not listed.

Rogue One
Lucasfilm; distributor: Walt Disney Pictures; director: Gareth Edwards. Cast: Felicity Jones, Mads Mikkelsen, Alan Tudyk, Ben Mendelsohn, Donnie Yen, Diego Luna, Forest Whitaker. Release: Dec. 16. DMR.

Incredible Predators (wt)
Silverback Productions, BBC Earth; distributors: BBC Earth, Giant Screen Films; director, producer: Alastair Fothergill; DP: Jamie McPherson; score: George Fenton; executive producers: Neil Nightingale, Alastair Fothergill. Release: December.
- Post-production is under way.

Pono: The Secret of Hawaii
Happy Planet Productions; distributor: tba; director, DP, writer: Pierre Hugues Routhier; producers: Richard W. Kroon, Margaret Goode; score: Cody Westheimer. Executive producers: Pierre Hugues Routhier, Richard W. Kroon. Cast: "Uncle" Earl Kamakaonaona. Release: December.
- Location filming on the Islands of Hawaii began in 2014 and will wrap in 2016.

Dream Big: Engineering our World
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Greg MacGillivray; producer: Shaun MacGillivray; DPs: Brad Ohlund, Greg MacGillivray, Ron Goodman. Release: Feb. 17, 2017.
- July: filmed in Phoenix and Scotland
- **Fall: filmed in China, Dubai, France, Haiti, Australia, Nepal, San Francisco, and Seattle.**

Train Time (wt)
Stephen Low Company; distributor: Stephen Low Company; director: Stephen Low; producer: Pietro Serapiglia. 2D. Release: February 2017.

Kong: Skull Island
Legendary Pictures; distributor: Warner Bros.; director: Jordan Vogt-Roberts. Cast: Brie Larson, Tom Hiddleston, Samuel L. Jackson, Toby Kebbell, Tian Jing, John Goodman. Release: March 10, 2017. DMR.

Amazon Adventure
SK Films; distributor: SK Films; director: Mike Slee; producers: Jonathan Barker, Wendy MacKeigan, Mike Slee, Yuri Sanada; DPs: Gerry Vasbenter, Richard Kirby; script: Wendy MacKeigan, Carl Knutson; executive producers: Jonathan Barker, Sean B. Carroll. ***Cast: Calum Finlay, Ed Birch, Bege Muniz, William Postlethwaite, Robert Daws.*** *Release: April 2017.*
- June: Filmed in London, Macclesfield, and at Darwin's home (Down House) in Kent.
- July-September: Began filming in various locations in Amazonas State, Brazil.

Full Charge: The Power of Innovation (wt)
N3D Land Films; distributor: nWave Pictures; directors: Pascal Vuong, Ronan Chapalain; producers: Catherine Vuong, Pascal Vuong, Eric Dllens; script: Pascal Vuong, Ronan Chapalain; DP: Vern Nobles; score: Franck Marchal; executive producers: Franck Savorgnan, Christian Fry, Jacob Lienau. Cast: Bertrand Piccard, André Borschberg. ***Release: April/May 2017.***
- June: Aerials over Oahu, Molokai, Maui, Big Island.
- **Editing footage of the Piccard family.**

Dunkirk
Warner Bros.; distributor: Warner Bros.; director: Christopher Nolan. Cast: Tom Hardy, Cillian Murphy, Harry Styles, Mark Rylance, Kenneth Branagh, James D'Arcy. 2D. Release: July 21, 2017. DMR.

Cuba
Golden Gate 3D; distributor: Giant Screen Films; director, producer: Peter Chang. Release: Summer 2017.

Earth Story (wt)
December Media; distributor: MacGillivray Freeman Films; directors: Russell Scott, Stephen Amezdroz; producers: Stephen Amezdroz, Matt Downey; script: Klaus Toft; executive producers: Tony Wright, Stuart Menzies. Release: October 2017.
- September: Filming will begin in the highlands of Iceland.

Great Barrier Reef 3D (wt)
December Media; distributor: MacGillivray Freeman Films; directors: Richard Fitzpatrick, Stephen Amezdroz; producer: Stephen Amezdroz; script: Klaus Toft; DP: Richard Fitzpatrick; executive producers: Tony Wright, Stuart Menzies. Release: October 2017.

Maximum Power
Masters Digital, 144 Productions; distributor: tba; Release: Fall 2017.

Soar
RPG Productions, Soaring the West, Inc.; distributor: tba; director: Matthew Murray; producers: Jennifer Casey, Rick Gordon; DP: Brandan Carlson; executive producers: Jennifer Casey, Rick Gordon. Release: fall 2017.
- July: Filmed world record high-altitude flight in Patagonia, Argentina.

Ancient Caves (wt)
Oceanic Research Group; distributor: MacGillivray Freeman Film Distribution; director: Jonathan Bird; producers: Jonathan Bird, Christine Bird; DP: Jonathan Bird; script: Art Cohen; score: Bruce Zimmerman. For 15/70 dome only. Release: November 2017.
- June: Filmed scientists in a cave in Minnesota.
- Fall: Shooting in Death Valley, France, Bahamas, Mexico.

Avatar 2
Lightstorm Entertainment; distributor: Twentieth Century Fox; director: James Cameron. Cast: Zoe Saldana, Sigourney Weaver, Sam Worthington, Stephen Lan. Release: Dec. 25, 2017. DMR.

Lightspeed Pioneers
No Final Frontier Productions, Mind's Eye Creative, Wonder Mill Cosmos; distributor: BIG & Digital (flat-screen), Evans & Sutherland (fulldome); director, producer, writer: Lee Fanning. 2D. Release: 2017.

Volcanoes: The Fires of Creation *
Takes viewers on an incredible ride inside volcanoes as they erupt in nature's greatest show.
Digital Crossing Productions; distributor: SK Films; director, DP: Michael Dalton-Smith; script: Michael Dalton-Smith, Karen Gordon; score: Robert Kroledge; executive producers: Michael Dalton-Smith Jonathan Barker. Cast: Carsten Peters. Release: early 2018.
- Summer/Fall: Filmed in the sulfur mines of Indonesia, the eruptions of Mount Sinabung and Mount Semeru, also in Indonesia.
- Filmed in Vanuatu at one of the largest and

most active lava lakes in the world.
– Shooting planned for Hawaii, Ethiopia, and Mexico.

Backyard Wilderness (formerly *Pondemonium*)
Archipelago Films, Arise Media; ***distributor: SK Films; directors, producers: Andrew Young, Susan Todd; script: Susan Todd, Andrew Young, Mose Richards; DP: Andrew Young. Release: Spring 2018.***

In Saturn's Rings
SV2 Studios; distributor: BIG & Digital; director, producer, writer, executive producer: Stephen van Vuuren. 2D. ***Release: Spring 2018 (flat and dome version); fall 2018 (fulldome).***
– September: final assembly and rendering began.
– Film will include Sept. 2017 "Grand Finale" crash of Cassini spacecraft into Saturn.
– Rough cut and teaser trailer will be shown at fall 2017 GSCA conference

In the Wake of the Dolphin (wt) ***
The story of the life of an Atlantic bottlenose dolphin, a wildlife ambassador named Han Solo.
Milbrand Cinema; distributor: tbd; director, producer, DP: Lance Milbrand; editor: Dave Choice; score: Icarus Music. Cast: Kathleen Dudzinski, Eldon Bolton. Release: spring 2018.
– Shooting planned for early 2017.

Superpower Dogs (wt)
Cosmic Picture; distributor: tbd; director: Daniel Ferguson; producers: Taran Davies, George Duffield, Dominic Cunningham-Reid, Daniel Ferguson; script: Daniel Ferguson; DP: Reed Smoot. Release: spring 2018.
– June: Filmed urban search and rescue puppies in training in Miami with Florida Task Force One K9 unit.

America's Treasures (wt) *
Jazz, blues, zydeco, old-time country music and many other variations on America's musical heritage are at the heart of *America's Treasures*.
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Greg MacGillivray; producer: Shaun MacGillivray; script: Stephen Judson; DPs: Brad Ohlund; score: Steve Wood. Release: 2018.

Sea of Love 3D (wt)
Achtel Pty. Ltd., House of 3D; distributor: tba; director: Pawel Achtel; producers: Pawel Achtel, Stuart Monksfield; DP: Pawel Achtel; script: Jan Aldenhoven. Release: 2018.
– July: Filmed humpback whales in Tonga in 6K 3D, HFR, HDR.

Return to Everest (wt)
MacGillivray Freeman Films; distributor: MacGillivray Freeman Films; director: Greg MacGillivray; producer: Shaun MacGillivray; script: Stephen Judson; DPs: Brad Ohlund, Michael Brown, Greg MacGillivray, Jack Tankard, Ron Goodman; score: Steve Wood. ***Release: 2019.***

Director and DP Michael Dalton-Smith descending into Marum Crater in Vanautu to shoot Volcanoes: The Fire of Creation.

Digital Crossing

*(from **SERVERS** on page 11)*
UHDTVs and which effectively piggybacks onto Rec. 2020, also specifies ten bits per component. Ultra HD Blu-ray supports Dolby Vision as an option, using up to twelve bits per component just as with its theatrical counterpart.

Even in applications where eight bits per component might seem "adequate," such as projection of standard dynamic-range images with a Rec. 709 color space at moderate or even low brightnesses, artifacts can become obvious. This is especially evident when adjacent projected images are blended, and overlap to produce a seamless image over a large screen area, as is typically needed in a fulldome. If the blending is done internally in the server, eight-bit output can result in noticeable artifacts within the blend zones.

The need for "faster" pixels

Faster pixels means more frames per second (fps). Various applications of video have used frame rates ranging from 24 fps all the way to thousands of frames per second for capture, display, or both.

As an offshoot of traditional cinema, giant-screen cinema today by and large uses 24 fps capture and delivery. This particular frame rate, of course, originates with film technology, actually going back to the early days of sound tracks, 24 fps being the lowest rate that provided adequate audio frequency response.

Decades of experience using this frame rate has led to a degree of comfort with it. It has also resulted in a large body of filming techniques that work within its limitations. These include minimizing the speed of pans and tracking the motion of the principal object of interest to keep its position in the frame relatively constant. Limited depth-of-field also assists with the latter by naturally blurring other objects in the frame. These techniques minimize the artifacts that can result from a relatively low frame rate: loss of resolution and judder.

However, giant-screen content producers often find such techniques limiting. The immersive nature of these productions invites viewers to look around the frame. Consequently, a loss of resolution due to blurring in any given portion may seem more objectionable. The wider fields of view covered by giant screens also mean that objects in motion move across larger apparent distances between frames, resulting in more apparent judder at a given frame rate.

Increasing the frame rate of the content significantly reduces the perception of judder. It also reduces the blurring of objects moving across the frame during image capture. There is another loss of resolution for moving objects caused by the sample-and-hold nature of most displays and this too is reduced. Figure 3 shows how the panning speed can be increased at higher frame rates to achieve a given perceived angular resolution. The benefits are not limited to electronic displays. However, film systems at higher frame rates (e.g., Showscan and IMAX HD) are

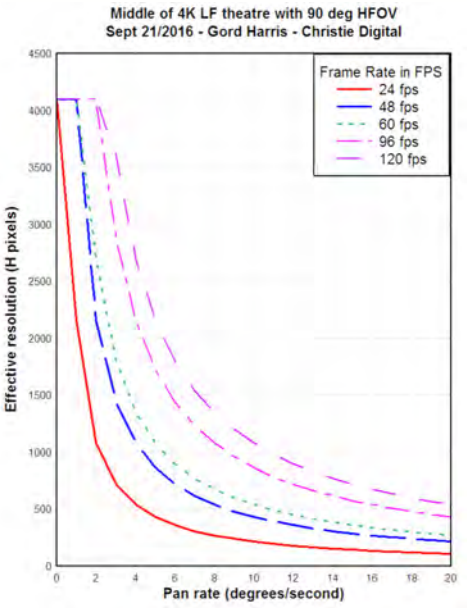


Figure 3. Dynamic resolution vs. panning speed.

challenging to accomplish and expensive. Higher frame rates are much easier and more economical to achieve electronically.

Television has, almost since its inception, recognized the value of higher frame rates, implementing 50 or 60 (interlaced) fields per second, depending on the country. While such rates were necessary because of the nature of cathode-ray tube phosphors, the advantages for reproduction of motion were not lost on the designers of these systems. That such image update rates increase the sense of realism compared to 24 fps has been well established. The Rec. 2020 standard for UHD ups the ante, explicitly supporting frame rates as high as 120 fps. At such a rate, the sense of watching an image on a screen can disappear.

The results of a survey taken during an HFR demo by Christie and **Pierre Routhier** of **Creat3** at the 2016 **Giant Screen Cinema Association Filmmakers' Symposium** showed a distinct preference among knowledgeable giant-screen viewers for 60 fps and 120 fps frame rates, with 120 fps ranked the highest. Although the number of respondents was relatively small, the survey results agreed with perceptual experiments done by Christie in partnership with several academic institutions under more controlled conditions, using non-expert viewers.

Faster pixels are the third leg of the "more, better, faster" tripod that elevates the quality of images on giant screens. While you will see gains implementing any one or two of the three, it is only when all three are done together that maximum advantage from each is realized. For instance, at 24 fps the judder and loss of dynamic resolution on moving objects means the increase in detail and sharpness expected using 4K or greater images will be realized only on static portions of the image. You are then essentially paying for resolution the audience won't necessarily see a good portion of the time.

Capabilities of today's servers

There are several different types of video server available today, including digital-cinema servers and general media servers. At present digital-cinema servers are not quite up to the full task as described here. On the plus side they can output resolutions up to 4,096 x 2,160, which matches the pixel format of a number of 4K projectors on the market. And by its nature, the native digital cinema package (DCP) for cinema servers supports 12-bit per component pixels. The limitation is the frame rate currently supported by the DCP, which is capped at 30 fps for 4K images. Although most of today's digital cinema projectors and cinema servers can actually handle 4K at up to 48 fps, perceptual studies suggest that 48 fps is only a small im-

provement over 24 fps, compared to the improvements seen at 60 fps and especially 120 fps.

However, cinema exhibition is already pushing beyond the limits of currently available cinema servers (and standard cinema projectors). For example, a full showing of **Ang Lee**'s latest feature, ***Billy Lynn's Long Halftime Walk***, requires equipment capable of 3D 4K at 120 fps per eye, as well as HDR. For the movie's special showing at IBC 2016, two state-of-the-art media servers were used (one for each eye's image) as well as two state-of-the-art Christie 4K laser-illuminated projectors: the Mirage 4KLH model (which is not a cinema projector) featuring Christie TruLife processing.

Another example is the custom HDR projector developed by Christie for Dolby Vision, which can handle 4K at 60 fps. The extremely positive reception that Dolby Vision and the full-featured presentations of *Billy Lynn's Long Halftime Walk* have received may well push updates to DCI specifications in the future.

Media servers are not under any of the limitations imposed by compliance with today's DCI standards. Many of them output 4K images; some even go as high as 8K. Some support ten bits per component, but few today fully support twelve. While 4K output at up to 60 fps is common, some go all the way up to 120fps. Higher resolutions, when supported, are typically output at 30 fps maximum.

However, several media servers that support 4K video can output multiple simultaneous streams, each on its own connector. It is also possible to link separate servers together, synchronizing their playback, although the cost and complexity are much higher. Either approach allows multiple 4K sub-images to be directed to as many projectors, where the images are warped and blended into a seamless composite image. Simply achieving the recommended resolution specified in DIGSS 1.2a (4,096 x 3,072) for a flat screen will require two 4K projectors fed by appropriately letterboxed 4K images which are then blended along one edge.

The highest image quality in dome projection is currently provided by the True8K digital fulldome system demonstrated during the GSCA's 2016 conference (*see article on page 1*). Designed by **Evans & Sutherland**, it uses ten Christie Mirage 304K, 3D-capable, 4K, 120 fps projectors with Christie TruLife processing. The format of the source image is 8,192 x 8,192 pixels, presented at 60 fps, of which 50 million unique pixels are shown after blending.

Conceptually, warping and blending for overlapped images can be accomplished in the server or in the projectors. As previously stated, greater than eight bits per component is a practical requirement for artifact-free blending. If the server doesn't provide that, using the projector's internal blending capability can look much better, provided it uses many more bits of precision per component or better yet floating point (e.g., Christie's TruLife) for all internal pixel calculations.

The future

Achieving maximum image quality for giant-screen cinema images will require not only higher resolutions starting at 4K, but more bit depth than eight bits per component, and higher frame rates than 24 fps. Because both regular cinema and home playback of movies have improved substantially (albeit the former currently in only a handful of venues), audience expectations for image quality are rising quickly. For giant-screen cinema to remain a premium experience, it needs to equal, if not surpass, the image quality viewers can see elsewhere.

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*(from **SHORTS** on page 24)*

(23x29.8 meters) — and has operated since 1994 with a GT3D 15/70 film projector. In October 2013, a first-gen IMAX (xenon) digital system was added, to allow the theater to screen the growing number of DMR movies not printed to film, although that system did not fill the width of the screen. With the current upgrade to laser, the first-gen projectors were removed, but the original film projector was left in place, largely for the sake of director **Christopher Nolan**'s upcoming film, ***Dunkirk***, which will include over 100 minutes shot on 15/65 film. During the upgrade, new wider seats were installed, dropping the seat count from 600 to 512.

In Chicago, the Navy Pier IMAX has also converted from IMAX film to laser, although there wasn't time during the closure to install the new IMAX 12-channel sound system. As a result, the theater will close early in the new year for that upgrade, new seats, and an expanded concessions area. The work is expected to be finished by late spring. The theater first opened in 1995.

Imax student awards

Imax Corporation has awarded four U.S. high schools and a non-profit film workshop $5,000 grants to produce short documentaries that will "raise awareness about some of today's most pressing environmental, social, and economic issues." The project is the first part of Imax's "In Focus" corporate social responsibility program, launched last spring in cooperation with the United Nations.

The recipients are: Woodrow Wilson High School, Washington, DC; University School of Nova Southeastern University, Fort Lauderdale, FL; Ballard High School, Seattle, WA; Canyon Crest Academy, San Diego, CA; Mythic Bridge, New York, NY.

SK Films wins business award

SK Films has won the Nature Inspiration Award for Best Canadian Business (Small and Medium), presented by the **Canadian Museum of Nature**. The award recognizes "individuals and organizations that, through their work or specific projects, encourage Canadians to take an interest in natural history, create links with nature, and contribute to its preservation." The awards are presented to in seven categories; SK was one of four finalists in its category.

Premiering This Month

Mysteries of China

Produced by **Giant Screen Films** *and* **Top Production China**, *distributed by Giant Screen Films. Directed by* **Keith Melton**, *produced by* **Don Kempf, Andy Wood, Keith Melton, Li Huixing**, *photographed by* **Reed Smoot**, *written by* **Mose Richards**. *Release: Oct. 7.*

"*Mysteries of China* captures one of the great archaeological events in modern times, telling the story of ancient China, the First Emperor, and the literal foundation of the China we know today. Starting with modern China and springing back as we seek the birth of this mighty nation, we talk of an ancient time when a fierce warrior brought together a warring nation, and how an accidental discovery changed everything we know about China's past. It happened in 1974, when farmers, digging a well in Xi'an, stumbled upon one of the greatest archaeological finds the world had ever discovered — the Terracotta Warriors and the Tomb of the First Emperor. The Terracotta Warriors offer a unique time capsule into the past, revealing many things about the very founding of this great country, which we use to tell a larger story of the growth of China into a true superpower. From modern China, to ancient China, and back again, the film is a visual adventure, using beautiful aerial photography and cutting-edge time-lapse techniques to reveal great majesty, tragedy, splendor and growth, in a nation that continues to excel quickly into the future."

Voyage of Time

Produced by **Sophisticated Films**, *distributed by* **Broad Green Pictures**. *Directed and written by* **Terence Malick**, *produced by* **Dede Gardner, Nicolas Gonda, Sarah Green, Grant Hill, Brad Pitt, Bill Pohlad, Andreas Roald, Sophokles Tasioulis**, *photographed by* **Paul Atkins**, *scored by* **Ennio Morricone**. *Executive producers:* **Tanner Beard, Mary Bing, Yves Chevalier, Ryan Rettig, Donald Rosenfeld**. *Release: Oct. 7.*

"***Voyage of Time: The IMAX Experience*** is a one-of-a-kind celebration of life and the grand history of the cosmos, transporting audiences into a vast yet up-close-and personal journey that spans the eons from the Big Bang to the dinosaur age to our present human world...and beyond. A labor of love from one of American cinema's most acclaimed and visually exciting filmmakers, Terence Malick (*The Thin Red Line, The Tree of Life*), *Voyage of Time* has been nearly four decades in the making and represents the filmmaker's first foray into documentary storytelling. The film's panorama of awe-inspiring images will take you into the heart of monumental events never witnessed — from the birth of the stars and galaxies to the explosion of diverse life-forms on planet earth, including humankind — in immersive new ways that only IMAX can deliver. This is a cosmic experience — a hymn to the glories of nature, life and scientific discovery — in which all the elements come together to form Malick's most original film to date."

Extreme Weather

Produced and distributed by **National Geographic Studios**. Directed, produced, and photographed by **Sean Casey**, written by Mose Richards. Executive producer: **Brooke Runnette**. Narrator: **Michael C. Hall**. Release: Oct. 15.

"Weather is one of the most dynamic forces shaping our planet, but now it's more complex and extreme than ever. Join famed storm chaser and award-winning filmmaker Sean Casey to experience our most Extreme Weather. Travel to the edge of 300-foot-tall glaciers collapsing in Alaska, to the front lines of massive wildfires in the West, and directly in the path of deadly yet mesmerizing tornadoes in the plains. Watch as researchers and everyday heroes uncover surprising connections to help us understand and adapt to our ever-changing weather."

Jack Reacher: Never Go Back

Produced and distributed by **Paramount Pictures**. *Directed by* **Edward Zwick**. *Cast:* **Tom Cruise, Cobie Smulders, Robert Knepper**. *2D. Release: Oct. 21. DMR.*

Inferno

Produced and distributed by **Sony Pictures**. *Directed by* **Ron Howard**. *Cast:* **Tom Hanks, Felicity Jones, Ben Foster, Irrfan Khan, Omar Sy, Sidse Babett Knudsen**. *2D. Release: Oct. 28. DMR.*

Conquest of the Skies (formerly *Wild Flight 3D*)

Produced by **Colossus Productions** *and* **Atlantic Productions**, *distributed by Atlantic Productions. Directed by* **David Lee**, *produced by* **Anthony Geffen**, *written by* **David Attenborough**, *photographed by* **Paul Williams, Peter Parks, Chris Parks**. *Executive producer: Anthony Geffen. Release: October.*

"The ability to fly is one of the greatest miracles in the natural world. Millions of creatures soar above our heads today, using a fabulous variety of techniques to defy gravity and master their aerial environment. Wild Flight 3D uses the very latest science and stunning special effects to uncover the 300-million-year story of flight as never before. The most advanced filming technology allows us to show the beauty and excitement of life on the wing, from the fastest predatory falcons to the most acrobatic of insects, night flyers like owls and bats, and the soaring and gliding specialists capable of traveling huge distances. Audiences will truly enter the amazing world of these remarkable animal aviators, and leave the theater thrilled by the story of wild flight."

Doctor Strange

Produced by **Marvel Studios**, *distributed by* **Walt Disney Studios**. *Directed by* **Scott Derrickson**. *Cast:* **Rachel McAdams, Benedict Cumberbatch, Tilda Swinton, Mads Mikkelsen, Chiwetel Ejiofor**. *Release: Nov. 18. DMR.*

Fantastic Beasts and Where to Find Them

Produced and distributed by **Warner Bros**. *Directed by* **David Yates**. *Cast:* **Eddie Redmayne, Ezra Miller, Colin Farrell, Jon Voight, Katherine Waterston, Ron Perlman, Samantha Morton**. *Release: Nov. 4. DMR.*

Bookings: Oct.-Nov. 2016 by Film

604 bookings of 88 films in 168 theaters

These listings to not include Hollywood films shown in multiplex IMAX theaters. Those films are listed when they are shown in non-multiplex theaters, and conversely, non-Hollywood giant-screen films showing on multiplex IMAX screens are also listed, where known.

Listings shown in **bold face** below are new or updated listings. The rest are unchanged from the previous issue.

The data on the following pages are ***not*** warranted to be comprehensive or accurate in every detail, despite our best efforts to make them so. They have been compiled from distributors, the Web, and other sources.

We will make every effort to improve the thoroughness, and accuracy of these data. If your theater or film is not shown here, please get in touch with us to update our listings.

Where a date is not shown, it means that no date was provided by the source or, in the case of a closing date, that no date has been set, or that the run is indefinite.

The key to film abbreviations is on page 21

Film	Theater	Open	Close
ACGOTS	Corpus Christi Lex	6/17/16	6/17/17
	Dayton	6/17/16	5/31/17
	Memphis Pink	**5/7/16**	**6/22/18**
	Singapore DC	8/1/16	12/1/16
Africa	**Hague**	**10/11/16**	**10/11/17**
AirRacer	Hutchinson	1/1/15	12/31/16
AIWC	Chandigarh	9/5/14	12/31/16
	Sacramento Imx	5/1/15	12/31/16
Amazon	Syracuse MOST	4/1/16	5/31/17
AMMM	Gatineau	10/15	10/16
	Melbourne MV	7/1/16	
Animalop	Pittsburgh CSC	1/1/10	
AOTE	**Raleigh**	**2/25/16**	**12/31/16**
	Sioux Falls	4/1/16	6/30/17
AsterME	Jersey City	4/15/16	4/14/17
	Lehi	5/27/16	5/30/17
BeauPlan	Atlanta FMNH	4/29/16	
	Austin TSHM	4/29/16	
	Charlotte DP	4/29/16	
	Chattanooga TA	4/29/16	
	Chicago NP AMC	4/29/16	
	Cleveland	4/29/16	
	Copenhagen TBP	4/29/16	
	Denver MNS	4/29/16	
	Des Moines	4/29/16	
	Edmonton TWS	4/29/16	
	Fort Lauderdale	4/29/16	
	Huntsville USSRC	4/29/16	
	Indianapolis Imx	4/29/16	
	Jersey City	4/29/16	
	KSC 1	4/29/16	
	London SM	4/29/16	
	Los Angeles CSC	4/29/16	
	Melbourne MV	4/29/16	
	Montreal SC	4/29/16	
	Norwalk MA	4/29/16	
	Raleigh	4/29/16	
	Regina	4/29/16	
	Saint Augustine	4/29/16	
	Saint Louis SC	4/29/16	
	Saint Paul SMM	4/29/16	
	Salt Lake City Clark	4/29/16	4/30/17
	San Jose Tech	4/29/16	
	Seattle PSC 2	4/29/16	
	Shreveport	4/29/16	
	Sudbury	4/29/16	
	Tallahassee CLC	4/29/16	
	Tampa MOSI	4/29/16	
	Toronto OSC	4/29/16	
	Victoria DCI	4/29/16	
	Washington NASM	4/29/16	
Bugs	Calgary TS	9/28/15	9/28/17
	Columbus COSI	9/15/14	6/30/17
	Edmonton TWS	12/26/13	6/30/17
	Fort Worth	2/1/16	1/8/17
	Lodz CC	8/24/15	8/24/17
	London SM	**10/22/16**	**3/22/17**
	San Diego RHF	7/1/14	6/30/17
	Vancouver TWS	3/11/06	6/30/17
CRA	Hartberg	3/25/15	12/31/16
	Philadelphia FI	6/1/16	10/31/16
	Pittsburgh CSC	10/1/15	12/31/16
CV	Alexandria BA		12/31/16
D-Day	Austin TSHM	5/1/14	12/31/16
	Chantilly		10/30/16
	Columbus GA NIM	5/23/14	12/31/16
	Erie	11/11/15	7/6/17
	Fort Worth	9/5/15	6/30/17
	Gatineau	**9/1/15**	**3/30/18**
	Hastings	5/15/15	5/31/17
	Hutchinson	4/21/14	6/30/17
	Pittsburgh CSC	5/15/15	12/31/16
	Raleigh	5/23/14	2/1/17
	Saint Louis SC	5/16/16	11/15/16
	Seattle PSC 2	3/29/14	6/30/19
	Sudbury	5/30/16	6/1/17
	Vancouver TWS	11/7/15	11/12/17
	Victoria DCI	3/21/14	12/31/16
	Washington NASM	5/23/14	10/30/16
DIA	Hartberg	3/25/15	12/31/16
DinoAliv	**Atlanta FMNH**	**8/15/16**	**8/14/17**
	Davenport Put	**2/1/15**	**6/30/17**
	Detroit MSC	10/17/15	10/31/16
	Fort Worth	**7/15/16**	**6/9/17**
	Houston MNS	12/15/15	6/30/17
	Mexicali	**11/5/16**	**5/31/17**
	Mobile	**9/24/16**	**4/14/17**
	Tampa MOSI	1/30/16	6/30/17
Dolphins	**Boston MOS**	**4/9/16**	**12/31/16**
	Fort Worth	5/28/16	12/31/17
	Hague	**10/11/11**	**12/31/16**
	Speyer Dome	**8/22/12**	**12/31/16**
	Speyer Dome		12/31/16
	Syracuse MOST	4/1/16	5/31/17
Dragons	Guayaquil	5/1/14	12/31/16
	Syracuse MOST	7/2/16	7/1/17
DSC	**Davenport Put**	**2/6/15**	**3/9/17**
	Dearborn THF	3/25/16	3/25/17
	Gatineau	8/5/16	10/4/16
	McMinnville	6/16/16	10/27/16
	Raleigh	1/16/15	1/15/17
Everest	Hartberg	3/25/15	12/31/16
ExtrWeat	**Boston MOS**	**10/15/16**	**10/14/17**
	Davenport Put	**10/15/16**	**2/15/17**
	Des Moines	**10/15/16**	**10/14/17**
	Hastings	**10/19/16**	**10/14/17**
	Houston MNS	**10/15/16**	**10/14/17**
	Hutchinson	**10/24/16**	**10/14/17**
	Jersey City	**10/15/16**	**10/14/17**
	Kansas City Sci	**10/15/16**	**10/14/17**
	Lehi	**10/15/16**	**10/14/17**
	Louisville KSC	**10/15/16**	**10/14/17**
	McMinnville	**10/27/16**	**10/26/17**
	Milwaukee	**10/15/16**	**10/14/17**
	Orlando SC	**10/15/16**	**10/14/17**
	Peoria RM	**10/15/16**	**10/14/17**
	Pittsburgh CSC	**10/15/16**	**10/14/17**
	Raleigh	**10/17/16**	**10/14/17**
	Regina	**10/15/16**	**10/14/17**
	Saint Augustine	**10/15/16**	**1/1/17**
	Salt Lake City Clark	**11/18/16**	**11/17/17**
	San Diego RHF	**11/11/15**	**10/14/17**
	San Jose Tech	**10/15/16**	**10/14/17**
	Sudbury	**10/15/16**	**10/14/17**
	Victoria DCI	**10/28/16**	**10/14/17**
	Virginia Beach AMSC	**10/15/16**	**10/14/17**
FightPil	Chantilly	12/10/04	7/17
	Corpus Christi Lex	5/12/12	7/17
	Dayton	3/1/13	6/30/17
	Huntsville USSRC	7/1/13	7/1/17
	McMinnville	3/23/12	7/1/17
FlyMons	**Calgary TS**	**1/1/15**	**4/15/17**
	Edmonton TWS	**1/4/16**	**1/3/17**
	Kenner	**6/4/16**	**6/3/17**
	Kuwait SCK	**9/5/16**	**9/4/17**
	Philadelphia FI	**11/25/16**	
FMTTM	Saint Louis SC	7/1/16	12/31/16
FON	**Davenport Put**	**5/18/16**	**5/17/17**
	Harrisburg	**10/15/15**	**11/2/17**
	Louisville KSC	**6/18/15**	**7/2/17**
FOTB	Apple Valley Imx	6/5/15	12/31/16
	Austin TSHM	10/1/16	10/31/16
	Baton Rouge LASM	9/1/15	8/31/17
	Calgary TS	6/28/13	12/31/16
	Chicago MSI	2/28/14	6/30/17
	Cleveland	11/27/13	6/30/17
	Columbus COSI	9/1/14	6/30/17
	Davenport Put	2/15/13	6/30/17
	Edmonton TWS	12/26/13	6/30/17
	Gatineau	10/5/12	6/30/17
	Hampton VASC	3/29/13	6/30/17
	Harrisburg	2/2/14	6/30/17
	Hastings	3/17/13	6/30/17
	Houston MNS	10/4/12	12/31/17
	London BFI Ode	9/6/13	1/31/17
	Louisville KSC	9/30/12	6/30/17
	Memphis Pink	3/1/14	5/27/17
	Norwalk MA	5/22/15	10/7/16
	Nuremberg	11/19/14	12/31/16
	Orlando SC	3/1/14	6/30/17
	Peoria RM	4/1/16	8/26/17
	Phoenix ASC	10/7/16	3/25/17
	Pittsburgh CSC	3/15/13	12/31/16
	Richmond SMV	5/1/13	6/30/17
	Sacramento Imx	8/13/13	6/30/17
	Saint Augustine	1/18/13	12/31/16
	Saint Paul SMM	7/1/16	6/30/17
	Salt Lake City Clark	2/8/13	8/6/17
	San Antonio 3D AMC	5/15/15	1/31/17
	San Diego RHF	10/12/12	9/30/17
	San Jose Tech	2/9/13	6/30/17
	Shanghai 3D STM	1/1/16	12/31/16
	Syracuse MOST	7/4/15	7/3/17
	Tallahassee CLC	1/18/13	6/30/17
	Valencia Spn	7/1/15	6/30/17
	Vancouver TWS	6/16/13	6/30/17
	Victoria DCI	4/5/13	6/30/17
	Washington NMNH	10/5/12	1/13/17
G3DNW	Al Khobar	8/20/15	2/20/17
	Apple Valley Imx	10/3/14	4/28/17
	Berlin CS	4/20/14	10/9/16
	Bogota Mal	6/24/16	6/23/17
	Boston NEA	2/15/16	12/31/16
	Budapest CC	4/24/14	5/21/17
	Davenport Put	10/17/14	10/16/16
	Guayaquil	4/20/14	5/4/17
	Hastings	2/10/15	6/10/17
	Houston MNS	6/6/16	5/31/17
	Louisville KSC	6/18/15	6/30/17
	Lucerne	6/5/14	12/4/16
	Melbourne MV	4/11/16	4/10/17
	Moscow BFC	10/6/14	10/31/16
	Nuremberg	10/15/14	11/20/16
	Orlando SC	7/5/14	1/4/17
	Parker	7/30/16	1/27/17
	Philadelphia FI	9/6/16	9/5/17
	Prague CC	5/22/14	5/21/17
	Saint Augustine	4/1/15	4/30/17
	Seattle PSC 2	11/20/15	4/30/17
	Virginia Beach AMSC	5/28/16	5/27/17
GC	**Grand Canyon DCI**	**11/1/99**	**12/17**
GCA	Grand Rapids Cel	4/22/16	4/21/17
	Paris Geo	7/1/14	12/31/16
	Richmond SMV	6/1/16	12/31/16
	Shanghai 3D STM		12/31/16
	Sinsheim	10/31/09	12/31/16
Gruffalo	Hastings	7/8/16	12/31/16
	Saint Augustine	1/1/15	12/31/16
GruffChi	Saint Augustine	2/1/15	12/31/16
	Sudbury	2/1/16	12/31/16
GWS	**Albuquerque NMMNH**	**7/1/16**	**6/30/17**
	Boston NEA	5/31/13	4/30/18
	Chicago MSI	**5/27/16**	**5/31/17**
	Fort Worth	**5/28/16**	**1/18/17**
	Galveston	6/28/14	12/31/16
	Gatineau	**10/7/16**	**6/30/18**
	Mobile	**5/28/16**	**5/30/17**
	Phoenix ASC	**9/15/16**	**9/30/17**
	Raleigh	**12/17/15**	**12/31/16**
	Sacramento Imx	**2/20/15**	**6/30/17**
	Sudbury	3/3/16	3/31/17
	Tampa MOSI	**1/1/16**	**6/30/18**
HCBTD	**San Simeon DCI**	**8/17/96**	
HidUniv	Glasgow	5/2/14	12/31/16
	London SM	10/18/13	12/31/16
	Monterrey Pap	**10/25/16**	**2/23/17**
	Tallahassee CLC	2/14/14	12/31/16
	Valencia Spn	4/1/14	12/31/16
HOTB	Dongguan STM	3/1/16	2/28/17
HumpbWha	Baltimore MSC	7/1/15	10/31/16
	Boston NEA	2/13/15	12/31/16
	Copenhagen TBP	10/8/15	10/7/16
	Davenport Put	6/1/16	6/1/17
	Hague	6/28/16	6/17/17
	Houston MNS	3/13/15	3/15/17
	Indianapolis Imx	7/1/16	12/31/16
	Kuwait SCK	7/6/16	12/31/16
	Montreal SC	9/23/16	6/16/17
	Norwalk MA	2/13/15	11/6/16
	Nuremberg	**4/30/15**	**12/31/16**
	Orlando SC	**10/28/16**	**10/27/17**
	Paris Geo	7/7/15	10/31/16
	Pittsburgh CSC	6/17/16	12/31/16
	Raleigh	3/20/15	3/1/17
	Regina	11/20/15	11/19/16
	Richmond SMV	3/14/15	12/31/16
	Sacramento Imx	8/19/16	1/31/17
	Sinsheim	5/21/15	1/31/17
	Tallahassee CLC	2/20/15	12/31/16
	Tijuana	7/15/16	7/14/17
	Vancouver TWS	10/9/15	12/30/16
	Virginia Beach AMSC	9/8/15	10/31/16

Film	Theater	Open	Close
Jerusale	Columbus COSI	2/11/15	2/10/17
	Fort Worth	3/21/16	6/30/17
	Galveston	**11/12/15**	**1/7/17**
	Harrisburg	10/18/14	10/31/16
	Kansas City Sci	9/19/14	3/17/17
	Louisville KSC	1/20/14	7/2/17
	Mexicali	2/9/16	2/9/17
	Milwaukee	**10/9/15**	**7/30/17**
	Peoria RM	**11/14/15**	**11/4/17**
	Pittsburgh CSC	3/7/14	12/31/16
	Raleigh	2/21/14	2/28/17
	Salt Lake City Clark	11/22/13	12/31/16
	San Jose Tech	3/27/15	6/20/17
	Speyer Dome	**12/12/13**	**1/8/17**
JIAC	Baltimore MSC	9/15/15	9/14/17
	Gatineau	7/17/15	12/31/16
	Nanchang JTSC	**11/10/16**	**11/10/17**
JMCSO	Al Khobar	9/5/16	9/5/17
	Dearborn THF	2/27/15	12/31/16
	Edmonton TWS	5/20/16	11/20/16
	Galveston	3/6/15	3/6/17
	Guayaquil	4/15/16	4/14/17
	Hangzhou LCSTM	1/1/16	12/31/16
	Hastings	2/11/16	2/11/17
	Keelung NMMST	1/1/16	12/31/16
	Kuwait SCK	7/17/15	7/17/17
	Lucerne	3/17/16	3/16/17
	Memphis Pink	6/25/16	6/23/17
	New Orleans	2/12/16	2/2/17
	Poitiers Solido	2/1/16	12/31/17
	Saint Augustine	1/1/16	1/1/17
	San Diego RHF	7/3/15	3/17/17
	Seattle PSC 1	9/30/16	3/30/17
	Taichung NMNS	7/1/16	12/31/16
	Washington NMNH	3/20/15	3/20/17
JTM	Edmonton TWS	12/26/13	6/30/17
	London BFI Ode		1/31/17
JTS	Aguascalientes	6/17/16	6/17/17
	Alamogordo	7/1/16	6/20/17
	Albuquerque NMMNH	4/30/16	4/30/17
	Baltimore MSC	7/1/16	6/30/17
	Chantilly	5/1/15	5/1/17
	Cincinnati MC	10/9/15	10/9/16
	Cleveland	**10/1/16**	**10/1/17**
	Columbus GA NIM	12/4/15	12/4/16
	Dayton	3/6/15	3/5/17
	Erie	6/18/16	6/18/17
	Garden City	7/1/16	7/1/17
	Hampton VASC	2/21/15	2/20/17
	Harrisburg	9/14/15	6/30/17
	Hong Kong SM	7/1/16	12/31/16
	Houston MNS	10/1/15	10/1/16
	Houston SCH	3/14/15	3/17/17
	Hutchinson	2/20/15	7/2/17
	Kolkata SC	7/1/16	7/1/17
	KSC 1	2/27/15	3/6/17
	Kuwait SCK	1/4/16	10/3/16
	Lehi	1/1/16	6/30/17
	Louisville KSC	**4/3/15**	**6/30/18**
	Lucerne	11/26/16	11/26/17
	Memphis Pink	**1/9/16**	**5/19/17**
	New Orleans	11/19/15	11/19/16
	Orlando SC	7/2/15	12/31/16
	Parker	10/1/16	3/31/17
	Penrith	7/21/16	12/31/16
	Peoria RM	6/11/16	12/17/16
	Phoenix ASC	10/1/16	10/1/17
	Salt Lake City Clark	5/15/15	5/31/17
	San Jose Tech	4/30/16	6/30/17
	Sioux Falls	8/19/16	8/19/17
	Syracuse MOST	10/1/16	4/1/17
	Taichung NMNS	7/1/16	6/30/17
	Taipei AM	7/1/16	7/1/17
	Tijuana	4/1/16	4/1/17
	Toulouse CDE	2/1/16	1/7/17
	Washington NASM	3/6/15	
JTTSP	**Columbus COSI**	**11/26/16**	**10/22/17**
	Lubbock SS	**11/25/16**	**5/26/17**
	Paris Geo	5/16/14	12/31/16
	Stockholm	2/14/14	12/31/16
Kenya	Hutchinson	5/30/15	12/31/16
	Mexico City Pap	11/13/15	11/1/16
L&C	**Davenport Put**	**4/27/16**	**4/26/17**
	Harrisburg	**11/7/16**	**11/3/17**
	Louisville KSC	**7/1/16**	**7/2/17**
	Pittsburgh CSC	**1/1/16**	**12/31/16**
	Saint Louis SC	**8/1/15**	**7/30/17**
	San Jose Tech	**6/8/16**	**6/20/17**
LastReef	**Cleveland**	**7/1/16**	**6/30/17**
	Davenport Put	**7/1/15**	**6/30/17**
	Dongguan STM	4/1/16	4/1/17
	Hutchinson	**10/5/12**	**9/30/17**
	Lehi	**6/24/16**	**6/30/17**
	Louisville KSC	**2/8/14**	**6/30/17**
	Moscow BFC	**6/1/16**	**10/31/17**
	Raleigh	**12/17/15**	**12/31/16**
	Sacramento Imx	**5/20/16**	**6/30/17**
	Salt Lake City Clark	**10/9/15**	**10/31/16**
	Sioux Falls	**1/30/15**	**6/30/17**
	Tallahassee CLC	**1/17/14**	**6/30/17**
LITAOA	Columbus COSI	10/14/15	10/13/16
	Davenport Put	7/1/16	9/30/17
	Dearborn THF	9/4/15	12/31/16
	Denver MNS	1/29/16	12/31/16
	Gatineau	4/18/16	4/17/17
	Hutchinson	5/1/15	5/30/17
	London BFI Ode	10/16/15	10/15/16
	Orlando SC	11/13/15	11/19/16
	Peoria RM	1/4/16	1/28/17
	Sacramento Imx	9/11/15	
	Saint Augustine	8/19/15	
	Saint Louis SC	1/22/16	12/31/16
	San Jose Tech	3/5/16	3/4/17
	Victoria DCI	6/10/16	6/9/17
LivingSe	Hartberg	10/1/13	12/31/16
LOF	McMinnville	3/23/12	6/15/17
MOC	**Albuquerque NMMNH**	**9/1/16**	**9/1/17**
	Charlotte DP	**11/19/16**	**4/30/17**
	Fort Worth	**10/14/16**	**10/31/17**
	Lehi	**9/1/16**	**8/31/17**
	Saint Louis SC	**10/1/16**	**10/1/17**
MOF	Pensacola NAM	11/8/96	
	Speyer Dome	1/1/15	12/31/16
MOTN	Alexandria BA	10/1/13	12/31/16
	Cairo EMA	12/15/15	12/14/16
	Pittsburgh CSC		12/31/16
MOTUW	Athens Eug	4/13/16	4/10/17
	Calgary TS	7/1/14	
	Dearborn THF	3/25/16	3/25/17
	Detroit MSC	10/7/15	10/6/16
	Gatineau	**1/15/16**	**6/30/17**
	Hague	10/1/15	12/17
	Houston MNS	**1/6/14**	**5/31/17**
	Kuwait SCK	1/30/14	1/31/17
	Mexicali	11/20/15	5/30/17
	Milwaukee	10/1/14	7/30/17
	Pittsburgh CSC	1/2/14	12/31/16
	Poitiers Imax 3D	2/1/16	1/31/17
	Raleigh	11/1/15	10/31/17
	San Jose Tech	8/30/14	6/20/17
	Singapore SC	6/13/16	12/31/17
	Tampa MOSI	**11/21/14**	**11/20/16**
	Victoria DCI	10/9/15	10/8/16
	Virginia Beach AMSC	2/1/16	2/11/17
	Washington NMNH	**9/26/14**	**9/30/17**
Mummies	**Albuquerque NMMNH**	**10/1/16**	**12/31/16**
	Denver MNS	**10/14/16**	**2/28/17**
	Mobile	**5/28/16**	**5/30/17**
ND	New Delhi ICC		
Niagara	**Niagara Can DCI**	**7/1/86**	
	Niagara NY DCI	**5/1/07**	
NPA	Atlanta FMNH	2/12/16	
	Austin TSHM	2/12/16	2/11/17
	Birmingham AL	5/20/16	5/19/17
	Boston MOS	2/12/16	2/11/17
	Branson	3/18/16	10/31/16
	Carnival Vista	**11/4/16**	**5/4/17**
	Chandigarh	9/5/16	9/4/17
	Charlotte DP	5/20/16	2/11/17
	Chattanooga TA	2/12/16	2/11/17
	Chicago MSI	2/12/16	2/11/17
	Columbus COSI	2/12/16	2/11/17
	Columbus GA NIM	4/1/16	3/29/17
	Copenhagen TBP	2/12/16	2/10/17
	Davenport Put	2/12/16	2/11/17
	Dearborn THF	3/25/16	12/31/16
	Denver MNS	7/1/16	6/30/17
	Des Moines	2/12/16	2/11/17
	Detroit MSC	2/12/16	2/11/17
	Edmonton TWS	2/12/16	2/11/17
	Fort Lauderdale	2/12/16	2/10/17
	Fort Worth	2/12/16	2/11/17
	Galveston	3/5/16	3/4/17
	Garza Garcia	6/23/16	10/24/16
	Hague	2/16/16	2/15/17
	Hampton VASC	4/29/16	4/28/17
	Harrisburg	7/1/16	6/30/17
	Hastings	6/9/16	6/8/17
	Houston MNS	2/12/16	5/31/17
	Hutchinson	2/19/16	2/18/17
	Indianapolis Imx	2/12/16	2/11/17
	Jersey City	2/12/16	2/11/17
	Kansas City Sci	5/31/16	5/30/17
	Kaohsiung NSTM	7/1/16	6/30/17
	Kitakyushu	7/2/16	6/30/17
	Kolkata SC	7/21/16	1/20/17
	Leon Exp	6/1/16	12/1/16
	London BFI Ode	2/12/16	
	Los Angeles CSC	2/12/16	2/11/17
	Louisville KSC	2/12/16	2/11/17
	Lubbock SS	5/20/16	5/19/17
	Lucerne	3/17/16	3/17/17
	Melbourne MV	2/25/16	2/24/17
	Memphis Pink	3/5/16	3/4/17
	Mexico City Pap	3/18/16	3/17/17
	Milwaukee	9/17/16	9/16/17
	Moscow BFC	9/17/16	11/6/16
	Norwalk MA	5/27/16	5/10/17
	Nuremberg	3/3/16	2/11/17
	Omaha Zoo	2/12/16	2/11/17
	Orlando SC	2/12/16	2/11/17
	Pensacola NAM	9/5/16	9/4/17
	Peoria RM	8/27/16	8/26/17
	Philadelphia FI	2/20/16	2/19/17
	Phoenix ASC	**9/17/16**	**3/2/17**
	Pittsburgh CSC	2/12/16	2/11/17
	Quebec Cpx	6/24/16	6/23/17
	Raleigh	2/27/16	2/26/17
	Regina	2/12/16	2/11/17
	Richmond SMV	4/10/16	4/9/17
	Sacramento Imx	2/19/16	2/18/17
	Saint Augustine	2/12/16	2/11/17
	Saint Louis SC	2/12/16	2/11/17
	Saint Paul SMM	3/4/16	2/11/17
	Salt Lake City Clark	2/12/16	2/11/17
	San Antonio San	7/25/16	7/25/17
	San Diego RHF	3/18/16	2/11/17
	San Jose Tech	2/12/16	2/11/17
	Sao Paulo Cpl	8/13/16	10/29/16
	Seattle PSC 2	2/12/16	2/11/17
	Shreveport	2/12/16	2/11/17
	Sinsheim	3/4/16	2/28/17
	Sudbury	2/12/16	2/11/17
	Sydney WBS	2/25/16	2/24/17
	Tallahassee CLC	2/19/16	2/18/17
	Tampa MOSI	2/12/16	2/11/17
	Tijuana	2/19/16	2/18/17
	Toronto OSC	7/1/16	6/30/17
	Valencia Spn	**10/7/16**	**10/6/17**
	Vancouver TWS	2/12/16	2/11/17
	Victoria DCI	2/12/16	3/3/17
	Virginia Beach AMSC	2/12/16	2/11/17
	Washington NMNH	2/12/16	2/11/17
	Yellowstone	5/1/16	4/30/17
	Zion	2/12/16	2/11/17
Ozarks	Branson	9/93	12/16
Penguins	Ahmedabad	7/1/16	6/30/17
PTJH	Chicago NP AMC	2/13/15	12/12/16
	Columbus COSI	**5/1/14**	**5/30/17**
	Davenport Put	7/17/14	7/14/17
	Gatineau	**5/9/14**	**3/31/17**
	Harrisburg	1/24/15	1/9/17
	Hutchinson	12/18/15	12/17/16
	Louisville KSC	7/4/14	7/2/17
	Milwaukee	**6/13/14**	**6/30/17**
	Tijuana	10/17/15	10/16/16
Rescue	**Dayton**	**6/1/16**	**6/1/17**
	McMinnville	6/1/12	12/31/17
Rheged	Penrith	7/1/00	
RME	Pittsburgh CSC	11/26/14	11/25/16
RobotsNG	Calgary TS	5/1/16	4/30/17
	Cleveland	11/1/15	10/1/16
	Columbus COSI	1/15/16	1/14/17
	Davenport Put	11/1/15	10/31/16
	Dearborn THF	3/25/16	3/25/17
	Denver MNS	3/18/16	2/28/17
	Erie	2/6/16	2/28/17
	Hampton VASC	6/20/15	6/19/17
	Houston MNS	10/2/15	10/1/16
	Hutchinson	5/20/16	5/20/17
	Philadelphia FI	**10/1/16**	**10/1/17**
	Phoenix ASC	**9/17/16**	
	Saint Augustine	8/1/16	7/30/17
	Saitama Omi	6/1/16	12/31/16
	Saitama Omi	**6/1/16**	**10/31/16**
	San Jose Tech	10/3/15	10/2/16
	Sioux Falls	3/4/16	
	Tallahassee CLC	10/16/15	10/15/16
	Tampa MOSI	**10/5/16**	**10/4/17**
	Valencia Spn	3/11/16	3/10/17
ROTB	Saint Augustine	10/3/15	12/31/16
	Sudbury	9/15/16	12/31/16
SeaMonst	**Davenport Put**	**4/27/16**	**4/26/17**
	Edmonton TWS	**1/3/16**	**1/2/17**
	Milwaukee	**2/5/16**	**2/4/17**
	Valencia Spn	**7/1/16**	**12/31/17**
SeaRex	Keelung NMMST	1/1/16	12/31/16
SFLIS	**Atlanta FMNH**	**10/7/16**	**10/6/17**
	Hampton VASC	**10/21/16**	**10/20/17**
	Lubbock SS	**10/7/16**	**10/6/17**
Sharks3D	Puebla	4/1/16	4/1/17
SpaceNex	Columbus GA NIM	12/4/15	12/31/16
TA	Davenport Put	1/1/16	12/31/16
	Vulcania	3/13/16	11/30/16
TinyGian	**Bradford**	**9/1/16**	**9/30/17**
	Cleveland	**10/1/16**	**10/31/17**
	Columbus COSI	**3/11/15**	**10/31/17**
	Galveston	**9/1/16**	**9/1/17**
	Jersey City	**9/25/15**	**2/12/17**
	La Coruna	**1/30/16**	**12/31/16**
	Las Palmas	**5/30/16**	**5/30/17**
	Orlando SC	**8/6/16**	**8/31/17**
	Poitiers Imax	**4/1/16**	**4/30/17**
	Raleigh	**9/16/15**	**12/31/16**
	Saint Félicien	**5/1/16**	**5/1/17**
	Seattle PSC 1	**9/12/15**	**9/12/17**
	Sudbury	**6/4/16**	**5/31/17**
ToFly	Rochester MSC	7/1/16	6/30/18
	Washington NASM	3/7/16	12/31/17
TOTIA	**Vancouver TWS**	**6/1/16**	**6/30/17**
TTA	Chicago NP AMC	9/30/13	12/31/16
	Cleveland		12/31/16
	Moscow BFC	**1/11/16**	**12/31/17**
UWT3D	Syracuse MOST	4/23/16	10/22/16
VanGogh	Peoria RM	3/22/16	2/1/17
Vikings	Gatineau	12/1/15	12/31/16
VOT	Salt Lake City Clark	10/21/16	6/30/17
Vulcania	Vulcania	2/22/02	
WATE	Katoomba	6/1/97	

Film	Theater	Open	Close
WildAfri	Al Khobar	4/15/16	4/30/17
	Albuquerque NMMNH	12/19/15	12/31/16
	Apple Valley Imx	2/1/16	6/30/17
	Atlanta FMNH	**1/8/16**	**1/8/17**
	Birmingham AL	3/18/16	2/15/17
	Boston MOS	11/20/15	11/30/16
	Chattanooga TA	**11/16/16**	**11/30/17**
	Columbus COSI	**6/3/16**	**1/1/17**
	Denver MNS	**9/23/16**	**9/30/17**
	Edmonton TWS	**10/28/16**	**10/31/17**
	Galveston	**5/28/16**	**5/31/17**
	Gatineau	**6/24/16**	**6/30/17**
	Houston MNS	**6/1/16**	**6/30/17**
	Montreal SC	12/18/15	12/31/16
	Orlando SC	3/12/16	3/31/17
	San Diego NHM	**9/7/16**	**9/30/17**
	Stockholm	**6/1/16**	**6/30/17**
	Tallahassee CLC	**5/15/16**	**5/31/17**
	Tijuana	**10/1/16**	**3/31/17**
WildCats	Lucerne	11/5/15	11/4/16
	New Orleans	5/27/16	11/27/16
WildOcea	**Davenport Put**	**2/1/15**	**6/30/17**
WM	Austin TSHM	3/1/16	12/31/16
	Dearborn THF	3/25/16	12/31/16
	Edmonton TWS	4/22/16	12/31/16
	Guayaquil	4/20/16	4/19/17
	Hastings	7/3/15	12/31/16
	Sudbury	4/1/16	12/31/16
WOTA	Atlanta FMNH	10/2/15	10/31/16
	Hong Kong SM	**9/16/16**	**2/28/17**
	Lubbock SS	11/13/15	11/30/16
	New York AMNH	**9/2/16**	**3/31/17**
	Orlando SC	**7/1/16**	**6/30/17**
WWDPP3D	**Bradford**	**9/16/15**	**9/30/17**
	Erie	**9/15/16**	**9/30/17**
	Gatineau	2/28/16	2/28/17
	Guayaquil	**5/1/16**	**2/28/17**
	Las Palmas	**5/30/16**	**5/30/17**
	Lehi	**9/26/14**	**9/30/17**
	Milwaukee	2/1/16	6/30/17
	Valencia Spn	**7/1/16**	**7/31/17**
Yell	**Yellowstone**	**5/1/14**	**12/31/17**
ZionCany	Zion	7/1/08	

Oct.-Nov. 2016 by Theater

Theater	Film	Open	Close
Aguascalientes	JTS	6/17/16	6/17/17
Ahmedabad	Penguins	7/1/16	6/30/17
Al Khobar	G3DNW	8/20/15	2/20/17
	JMCSO	9/5/16	9/5/17
	WildAfri	4/15/16	4/30/17
Alamogordo	JTS	7/1/16	6/20/17
Albuquerque NMMNH	**GWS**	**7/1/16**	**6/30/17**
	JTS	4/30/16	4/30/17
	MOC	**9/1/16**	**9/1/17**
	Mummies	**10/1/16**	**12/31/16**
	WildAfri	12/19/15	12/31/16
Alexandria BA	CV		12/31/16
	MOTN	10/1/13	12/31/16
Apple Valley Imx	FOTB	6/5/15	12/31/16
	G3DNW	10/3/14	4/28/17
	WildAfri	2/1/16	6/30/17
Athens Eug	MOTUW	4/13/16	4/10/17
Atlanta FMNH	BeauPlan	4/29/16	
	DinoAliv	**8/15/16**	**8/14/17**
	NPA	2/12/16	
	SFLIS	**10/7/16**	**10/6/17**
	WildAfri	**1/8/16**	**1/8/17**
	WOTA	10/2/15	10/31/16
Austin TSHM	BeauPlan	4/29/16	
	D-Day	5/1/14	12/31/16
	FOTB	10/1/16	10/31/16
	NPA	2/12/16	2/11/17
	WM	3/1/16	12/31/16
Baltimore MSC	HumpbWha	7/1/15	10/31/16
	JIAC	9/15/15	9/14/17
	JTS	7/1/16	6/30/17
Baton Rouge LASM	FOTB	9/1/15	8/31/17
Berlin CS	G3DNW	4/20/14	10/9/16
Birmingham AL	NPA	5/20/16	5/19/17
	WildAfri	3/18/16	2/15/17
Bogota Mal	G3DNW	6/24/16	6/23/17
Boston MOS	**Dolphins**	**4/9/16**	**12/31/16**
	ExtrWeat	**10/15/16**	**10/14/17**
	NPA	2/12/16	2/11/17
	WildAfri	11/20/15	11/30/16
Boston NEA	G3DNW	2/15/16	12/31/16
	GWS	5/31/13	4/30/18
	HumpbWha	2/13/15	12/31/16
Bradford	**TinyGian**	**9/1/16**	**9/30/17**
	WWDPP3D	**9/16/15**	**9/30/17**
Branson	NPA	3/18/16	10/31/16
	Ozarks	9/93	12/16
Budapest CC	G3DNW	4/24/14	5/21/17
Cairo EMA	MOTN	12/15/15	12/14/16
Calgary TS	Bugs	9/28/15	9/28/17
	FlyMons	**1/1/15**	**4/15/17**
	FOTB	6/28/13	12/31/16
	MOTUW	7/1/14	
	RobotsNG	5/1/16	4/30/17
Carnival Vista	**NPA**	**11/4/16**	**5/4/17**
Chandigarh	AIWC	9/5/14	12/31/16
	NPA	9/5/16	9/4/17
Chantilly	D-Day		10/30/16
	FightPil	12/10/04	7/17
	JTS	5/1/15	5/1/17
Charlotte DP	BeauPlan	4/29/16	
	MOC	**11/19/16**	**4/30/17**
	NPA	5/20/16	2/11/17
Chattanooga TA	BeauPlan	4/29/16	
	NPA	2/12/16	2/11/17
	WildAfri	**11/16/16**	**11/30/17**
Chicago MSI	FOTB	2/28/14	6/30/17
	GWS	**5/27/16**	**5/31/17**
	NPA	2/12/16	2/11/17
Chicago NP AMC	BeauPlan	4/29/16	
	PTJH	2/13/15	12/12/16
	TTA	9/30/13	12/31/16
Cincinnati MC	JTS	10/9/15	10/9/16
Cleveland	BeauPlan	4/29/16	
	FOTB	11/27/13	6/30/17
	JTS	**10/1/16**	**10/1/17**
	LastReef	**7/1/16**	**6/30/17**
	RobotsNG	11/1/15	10/1/16
	TinyGian	**10/1/16**	**10/31/17**
	TTA		12/31/16
Columbus COSI	Bugs	9/15/14	6/30/17
	FOTB	9/1/14	6/30/17
	Jerusale	2/11/15	2/10/17
	JTTSP	**11/26/16**	**10/22/17**
	LITAOA	10/14/15	10/13/16
	NPA	2/12/16	2/11/17
	PTJH	**5/1/14**	**5/30/17**
	RobotsNG	1/15/16	1/14/17
	TinyGian	**3/11/15**	**10/31/17**
	WildAfri	**6/3/16**	**1/1/17**
Columbus GA NIM	D-Day	5/23/14	12/31/16
	JTS	12/4/15	12/4/16
	NPA	4/1/16	3/29/17
	SpaceNex	12/4/15	12/31/16
Copenhagen TBP	BeauPlan	4/29/16	
	HumpbWha	10/8/15	10/7/16
	NPA	2/12/16	2/10/17
Corpus Christi Lex	ACGOTS	6/17/16	6/17/17
	FightPil	5/12/12	7/17
Davenport Put	**DinoAliv**	**2/1/15**	**6/30/17**
	DSC	**2/6/15**	**3/9/17**
	ExtrWeat	**10/15/16**	**2/15/17**
	FON	**5/18/16**	**5/17/17**
	FOTB	2/15/13	6/30/17
	G3DNW	10/17/14	10/16/16
	HumpbWha	6/1/16	6/1/17
	L&C	**4/27/16**	**4/26/17**
	LastReef	**7/1/15**	**6/30/17**
	LITAOA	7/1/16	9/30/17
	NPA	2/12/16	2/11/17
	PTJH	7/17/14	7/14/17
	RobotsNG	11/1/15	10/31/16
	SeaMonst	**4/27/16**	**4/26/17**
	TA	1/1/16	12/31/16
	WildOcea	**2/1/15**	**6/30/17**
Dayton	ACGOTS	6/17/16	5/31/17
	FightPil	3/1/13	6/30/17
	JTS	3/6/15	3/5/17
	Rescue	**6/1/16**	**6/1/17**
Dearborn THF	DSC	3/25/16	3/25/17
	JMCSO	2/27/15	12/31/16
	LITAOA	9/4/15	12/31/16
	MOTUW	3/25/16	3/25/17
	NPA	3/25/16	12/31/16
	RobotsNG	3/25/16	3/25/17
	WM	3/25/16	12/31/16
Denver MNS	BeauPlan	4/29/16	
	LITAOA	1/29/16	12/31/16
	Mummies	**10/14/16**	**2/28/17**
	NPA	7/1/16	6/30/17
	RobotsNG	3/18/16	2/28/17
	WildAfri	**9/23/16**	**9/30/17**
Des Moines	BeauPlan	4/29/16	
	ExtrWeat	**10/15/16**	**10/14/17**
	NPA	2/12/16	2/11/17
Detroit MSC	DinoAliv	10/17/15	10/31/16
	MOTUW	10/7/15	10/6/16
	NPA	2/12/16	2/11/17
Dongguan STM	HOTB	3/1/16	2/28/17
	LastReef	4/1/16	4/1/17
Edmonton TWS	BeauPlan	4/29/16	
	Bugs	12/26/13	6/30/17
	FlyMons	**1/4/16**	**1/3/17**
	FOTB	12/26/13	6/30/17
	JMCSO	5/20/16	11/20/16
	JTM	12/26/13	6/30/17
	NPA	2/12/16	2/11/17
	SeaMonst	**1/3/16**	**1/2/17**
	WildAfri	**10/28/16**	**10/31/17**
	WM	4/22/16	12/31/16
Erie	D-Day	11/11/15	7/6/17
	JTS	6/18/16	6/18/17
	RobotsNG	2/6/16	2/28/17
	WWDPP3D	**9/15/16**	**9/30/17**
Fort Lauderdale	BeauPlan	4/29/16	
	NPA	2/12/16	2/10/17
Fort Worth	Bugs	2/1/16	1/8/17
	D-Day	9/5/15	6/30/17
	DinoAliv	**7/15/16**	**6/9/17**
	Dolphins	5/28/16	12/31/17
	GWS	**5/28/16**	**1/18/17**
	Jerusale	3/21/16	6/30/17
	MOC	**10/14/16**	**10/31/17**
	NPA	2/12/16	2/11/17
Galveston	GWS	6/28/14	12/31/16
	Jerusale	**11/12/15**	**1/7/17**
	JMCSO	3/6/15	3/6/17
	NPA	3/5/16	3/4/17
	TinyGian	**9/1/16**	**9/1/17**
	WildAfri	**5/28/16**	**5/31/17**
Garden City	JTS	7/1/16	7/1/17
Garza Garcia	NPA	6/23/16	10/24/16
Gatineau	AMMM	10/15	10/16
	D-Day	**9/1/15**	**3/30/18**
	DSC	8/5/16	10/4/16
	FOTB	10/5/12	6/30/17
	GWS	**10/7/16**	**6/30/18**
	JIAC	7/17/15	12/31/16
	LITAOA	4/18/16	4/17/17
	MOTUW	**1/15/16**	**6/30/17**
	PTJH	**5/9/14**	**3/31/17**
	Vikings	12/1/15	12/31/16
	WildAfri	**6/24/16**	**6/30/17**
	WWDPP3D	2/28/16	2/28/17
Glasgow	HidUniv	5/2/14	12/31/16
Grand Canyon DCI	**GC**	**11/1/99**	**12/17**
Grand Rapids Cel	GCA	4/22/16	4/21/17
Guayaquil	Dragons	5/1/14	12/31/16
	G3DNW	4/20/14	5/4/17
	JMCSO	4/15/16	4/14/17
	WM	4/20/16	4/19/17
	WWDPP3D	**5/1/16**	**2/28/17**
Hague	**Africa**	**10/11/16**	**10/11/17**
	Dolphins	**10/11/11**	**12/31/16**
	HumpbWha	6/28/16	6/17/17
	MOTUW	10/1/15	12/17
	NPA	2/16/16	2/15/17
Hampton VASC	FOTB	3/29/13	6/30/17
	JTS	2/21/15	2/20/17
	NPA	4/29/16	4/28/17
	RobotsNG	6/20/15	6/19/17
	SFLIS	**10/21/16**	**10/20/17**
Hangzhou LCSTM	JMCSO	1/1/16	12/31/16
Harrisburg	**FON**	**10/15/15**	**11/2/17**
	FOTB	2/2/14	6/30/17
	Jerusale	10/18/14	10/31/16
	JTS	9/14/15	6/30/17
	L&C	**11/7/16**	**11/3/17**
	NPA	7/1/16	6/30/17
	PTJH	1/24/15	1/9/17
Hartberg	CRA	3/25/15	12/31/16
	DIA	3/25/15	12/31/16
	Everest	3/25/15	12/31/16
	LivingSe	10/1/13	12/31/16
Hastings	D-Day	5/15/15	5/31/17
	ExtrWeat	**10/19/16**	**10/14/17**
	FOTB	3/17/13	6/30/17
	G3DNW	2/10/15	6/10/17
	Gruffalo	7/8/16	12/31/16
	JMCSO	2/11/16	2/11/17
	NPA	6/9/16	6/8/17
	WM	7/3/15	12/31/16
Hong Kong SM	JTS	7/1/16	12/31/16
	WOTA	**9/16/16**	**2/28/17**
Houston MNS	DinoAliv	12/15/15	6/30/17
	ExtrWeat	**10/15/16**	**10/14/17**
	FOTB	10/4/12	12/31/17
	G3DNW	6/6/16	5/31/17
	HumpbWha	3/13/15	3/15/17
	JTS	10/1/15	10/1/16
	MOTUW	**1/6/14**	**5/31/17**

Theater	Film	Open	Close
	NPA	2/12/16	5/31/17
	RobotsNG	10/2/15	10/1/16
	WildAfri	**6/1/16**	**6/30/17**
Houston SCH	JTS	3/14/15	3/17/17
Huntsville USSRC	BeauPlan	4/29/16	
	FightPil	7/1/13	7/1/17
Hutchinson	AirRacer	1/1/15	12/31/16
	D-Day	4/21/14	6/30/17
	ExtrWeat	**10/24/16**	**10/14/17**
	JTS	2/20/15	7/2/17
	Kenya	5/30/15	12/31/16
	LastReef	**10/5/12**	**9/30/17**
	LITAOA	5/1/15	5/30/17
	NPA	2/19/16	2/18/17
	PTJH	12/18/15	12/17/16
	RobotsNG	5/20/16	5/20/17
Indianapolis Imx	BeauPlan	4/29/16	
	HumpbWha	7/1/16	12/31/16
	NPA	2/12/16	2/11/17
Jersey City	AsterME	4/15/16	4/14/17
	BeauPlan	4/29/16	
	ExtrWeat	**10/15/16**	**10/14/17**
	NPA	2/12/16	2/11/17
	TinyGian	**9/25/15**	**2/12/17**
Kansas City Sci	**ExtrWeat**	**10/15/16**	**10/14/17**
	Jerusale	9/19/14	3/17/17
	NPA	5/31/16	5/30/17
Kaohsiung NSTM	NPA	7/1/16	6/30/17
Katoomba	WATE	6/1/97	
Keelung NMMST	JMCSO	1/1/16	12/31/16
	SeaRex	1/1/16	12/31/16
Kenner	**FlyMons**	**6/4/16**	**6/3/17**
Kitakyushu	NPA	7/2/16	6/30/17
Kolkata SC	JTS	7/1/16	7/1/17
	NPA	7/21/16	1/20/17
KSC 1	BeauPlan	4/29/16	
	JTS	2/27/15	3/6/17
Kuwait SCK	**FlyMons**	**9/5/16**	**9/4/17**
	HumpbWha	7/6/16	12/31/16
	JMCSO	7/17/15	7/17/17
	JTS	1/4/16	10/3/16
	MOTUW	1/30/14	1/31/17
La Coruna	**TinyGian**	**1/30/16**	**12/31/16**
Las Palmas	**TinyGian**	**5/30/16**	**5/30/17**
	WWDPP3D	**5/30/16**	**5/30/17**
Lehi	AsterME	5/27/16	5/30/17
	ExtrWeat	**10/15/16**	**10/14/17**
	JTS	1/1/16	6/30/17
	LastReef	**6/24/16**	**6/30/17**
	MOC	**9/1/16**	**8/31/17**
	WWDPP3D	**9/26/14**	**9/30/17**
Leon Exp	NPA	6/1/16	12/1/16
Lodz CC	Bugs	8/24/15	8/24/17
London BFI Ode	FOTB	9/6/13	1/31/17
	JTM		1/31/17
	LITAOA	10/16/15	10/15/16
	NPA	2/12/16	
London SM	BeauPlan	4/29/16	
	Bugs	**10/22/16**	**3/22/17**
	HidUniv	10/18/13	12/31/16
Los Angeles CSC	BeauPlan	4/29/16	
	NPA	2/12/16	2/11/17
Louisville KSC	**ExtrWeat**	**10/15/16**	**10/14/17**
	FON	**6/18/15**	**7/2/17**
	FOTB	9/30/12	6/30/17
	G3DNW	6/18/15	6/30/17
	Jerusale	1/20/14	7/2/17
	JTS	**4/3/15**	**6/30/18**
	L&C	**7/1/16**	**7/2/17**
	LastReef	**2/8/14**	**6/30/17**
	NPA	2/12/16	2/11/17
	PTJH	7/4/14	7/2/17
Lubbock SS	**JTTSP**	**11/25/16**	**5/26/17**
	NPA	5/20/16	5/19/17
	SFLIS	**10/7/16**	**10/6/17**
	WOTA	11/13/15	11/30/16
Lucerne	G3DNW	6/5/14	12/4/16
	JMCSO	3/17/16	3/16/17
	JTS	11/26/16	11/26/17
	NPA	3/17/16	3/17/17
	WildCats	11/5/15	11/4/16
McMinnville	DSC	6/16/16	10/27/16
	ExtrWeat	**10/27/16**	**10/26/17**
	FightPil	3/23/12	7/1/17
	LOF	3/23/12	6/15/17
	Rescue	6/1/12	12/31/17
Melbourne MV	AMMM	7/1/16	
	BeauPlan	4/29/16	
	G3DNW	4/11/16	4/10/17
	NPA	2/25/16	2/24/17
Memphis Pink	**ACGOTS**	**5/7/16**	**6/22/18**
	FOTB	3/1/14	5/27/17
	JMCSO	6/25/16	6/23/17
	JTS	**1/9/16**	**5/19/17**
	NPA	3/5/16	3/4/17
Mexicali	**DinoAliv**	**11/5/16**	**5/31/17**
	Jerusale	2/9/16	2/9/17
	MOTUW	11/20/15	5/30/17
Mexico City Pap	Kenya	11/13/15	11/1/16
	NPA	3/18/16	3/17/17
Milwaukee	**ExtrWeat**	**10/15/16**	**10/14/17**
	Jerusale	**10/9/15**	**7/30/17**
	MOTUW	10/1/14	7/30/17
	NPA	9/17/16	9/16/17
	PTJH	**6/13/14**	**6/30/17**
	SeaMonst	**2/5/16**	**2/4/17**
	WWDPP3D	2/1/16	6/30/17
Mobile	**DinoAliv**	**9/24/16**	**4/14/17**
	GWS	**5/28/16**	**5/30/17**
	Mummies	**5/28/16**	**5/30/17**
Monterrey Pap	**HidUniv**	**10/25/16**	**2/23/17**
Montreal SC	BeauPlan	4/29/16	
	HumpbWha	9/23/16	6/16/17
	WildAfri	12/18/15	12/31/16
Moscow BFC	G3DNW	10/6/14	10/31/16
	LastReef	**6/1/16**	**10/31/17**
	NPA	9/17/16	11/6/16
	TTA	**1/11/16**	**12/31/17**
Nanchang JTSC	**JIAC**	**11/10/16**	**11/10/17**
New Delhi ICC	ND		
New Orleans	JMCSO	2/12/16	2/2/17
	JTS	11/19/15	11/19/16
	WildCats	5/27/16	11/27/16
New York AMNH	**WOTA**	**9/2/16**	**3/31/17**
Niagara Can DCI	**Niagara**	**7/1/86**	
Niagara NY DCI	**Niagara**	**5/1/07**	
Norwalk MA	BeauPlan	4/29/16	
	FOTB	5/22/15	10/7/16
	HumpbWha	2/13/15	11/6/16
	NPA	5/27/16	5/10/17
Nuremberg	FOTB	11/19/14	12/31/16
	G3DNW	10/15/14	11/20/16
	HumpbWha	**4/30/15**	**12/31/16**
	NPA	3/3/16	2/11/17
Omaha Zoo	NPA	2/12/16	2/11/17
Orlando SC	**ExtrWeat**	**10/15/16**	**10/14/17**
	FOTB	3/1/14	6/30/17
	G3DNW	7/5/14	1/4/17
	HumpbWha	**10/28/16**	**10/27/17**
	JTS	7/2/15	12/31/16
	LITAOA	11/13/15	11/19/16
	NPA	2/12/16	2/11/17
	TinyGian	**8/6/16**	**8/31/17**
	WildAfri	3/12/16	3/31/17
	WOTA	**7/1/16**	**6/30/17**
Paris Geo	GCA	7/1/14	12/31/16
	HumpbWha	7/7/15	10/31/16
	JTTSP	5/16/14	12/31/16
Parker	G3DNW	7/30/16	1/27/17
	JTS	10/1/16	3/31/17
Penrith	JTS	7/21/16	12/31/16
	Rheged	7/1/00	
Pensacola NAM	MOF	11/8/96	
	NPA	9/5/16	9/4/17
Peoria RM	**ExtrWeat**	**10/15/16**	**10/14/17**
	FOTB	4/1/16	8/26/17
	Jerusale	**11/14/15**	**11/4/17**
	JTS	6/11/16	12/17/16
	LITAOA	1/4/16	1/28/17
	NPA	8/27/16	8/26/17
	VanGogh	3/22/16	2/1/17
Philadelphia FI	CRA	6/1/16	10/31/16
	FlyMons	**11/25/16**	
	G3DNW	9/6/16	9/5/17
	NPA	2/20/16	2/19/17
	RobotsNG	**10/1/16**	**10/1/17**
Phoenix ASC	FOTB	10/7/16	3/25/17
	GWS	**9/15/16**	**9/30/17**
	JTS	10/1/16	10/1/17
	NPA	**9/17/16**	**3/2/17**
	RobotsNG	**9/17/16**	
Pittsburgh CSC	Animalop	1/1/10	
	CRA	10/1/15	12/31/16
	D-Day	5/15/15	12/31/16
	ExtrWeat	**10/15/16**	**10/14/17**
	FOTB	3/15/13	12/31/16
	HumpbWha	6/17/16	12/31/16
	Jerusale	3/7/14	12/31/16
	L&C	**1/1/16**	**12/31/16**
	MOTN		12/31/16
	MOTUW	1/2/14	12/31/16
	NPA	2/12/16	2/11/17
	RME	11/26/14	11/25/16
Poitiers Imax	**TinyGian**	**4/1/16**	**4/30/17**
Poitiers Imax 3D	MOTUW	2/1/16	1/31/17
Poitiers Solido	JMCSO	2/1/16	12/31/17
Prague CC	G3DNW	5/22/14	5/21/17
Puebla	Sharks3D	4/1/16	4/1/17
Quebec Cpx	NPA	6/24/16	6/23/17
Raleigh	**AOTE**	**2/25/16**	**12/31/16**
	BeauPlan	4/29/16	
	D-Day	5/23/14	2/1/17
	DSC	1/16/15	1/15/17
	ExtrWeat	**10/17/16**	**10/14/17**
	GWS	**12/17/15**	**12/31/16**
	HumpbWha	3/20/15	3/1/17
	Jerusale	2/21/14	2/28/17
	LastReef	**12/17/15**	**12/31/16**
	MOTUW	11/1/15	10/31/17
	NPA	2/27/16	2/26/17
	TinyGian	**9/16/15**	**12/31/16**
Regina	BeauPlan	4/29/16	
	ExtrWeat	**10/15/16**	**10/14/17**
	HumpbWha	11/20/15	11/19/16
	NPA	2/12/16	2/11/17
Richmond SMV	FOTB	5/1/13	6/30/17
	GCA	6/1/16	12/31/16
	HumpbWha	3/14/15	12/31/16
	NPA	4/10/16	4/9/17
Rochester MSC	ToFly	7/1/16	6/30/18
Sacramento Imx	AIWC	5/1/15	12/31/16
	FOTB	8/13/13	6/30/17
	GWS	**2/20/15**	**6/30/17**
	HumpbWha	8/19/16	1/31/17
	LastReef	**5/20/16**	**6/30/17**
	LITAOA	9/11/15	
	NPA	2/19/16	2/18/17
Saint Augustine	BeauPlan	4/29/16	
	ExtrWeat	**10/15/16**	**1/1/17**
	FOTB	1/18/13	12/31/16
	G3DNW	4/1/15	4/30/17
	Gruffalo	1/1/15	12/31/16
	GruffChi	2/1/15	12/31/16
	JMCSO	1/1/16	1/1/17
	LITAOA	8/19/15	
	NPA	2/12/16	2/11/17
	RobotsNG	8/1/16	7/30/17
	ROTB	10/3/15	12/31/16
Saint Félicien	**TinyGian**	**5/1/16**	**5/1/17**
Saint Louis SC	BeauPlan	4/29/16	
	D-Day	5/16/16	11/15/16
	FMTTM	7/1/16	12/31/16
	L&C	**8/1/15**	**7/30/17**
	LITAOA	1/22/16	12/31/16
	MOC	**10/1/16**	**10/1/17**
	NPA	2/12/16	2/11/17
Saint Paul SMM	BeauPlan	4/29/16	
	FOTB	7/1/16	6/30/17
	NPA	3/4/16	2/11/17
Saitama Omi	RobotsNG	6/1/16	12/31/16
	RobotsNG	**6/1/16**	**10/31/16**
Salt Lake City Clark	BeauPlan	4/29/16	4/30/17
	ExtrWeat	**11/18/16**	**11/17/17**
	FOTB	2/8/13	8/6/17
	Jerusale	11/22/13	12/31/16
	JTS	5/15/15	5/31/17
	LastReef	**10/9/15**	**10/31/16**
	NPA	2/12/16	2/11/17
	VOT	10/21/16	6/30/17
San Antonio 3D AMC	FOTB	5/15/15	1/31/17
San Antonio San	NPA	7/25/16	7/25/17
San Diego NHM	**WildAfri**	**9/7/16**	**9/30/17**
San Diego RHF	Bugs	7/1/14	6/30/17
	ExtrWeat	**11/11/15**	**10/14/17**
	FOTB	10/12/12	9/30/17
	JMCSO	7/3/15	3/17/17
	NPA	3/18/16	2/11/17
San Jose Tech	BeauPlan	4/29/16	
	ExtrWeat	**10/15/16**	**10/14/17**
	FOTB	2/9/13	6/30/17
	Jerusale	3/27/15	6/20/17
	JTS	4/30/16	6/30/17
	L&C	**6/8/16**	**6/20/17**
	LITAOA	3/5/16	3/4/17
	MOTUW	8/30/14	6/20/17
	NPA	2/12/16	2/11/17
	RobotsNG	10/3/15	10/2/16
San Simeon DCI	**HCBTD**	**8/17/96**	
Sao Paulo Cpl	NPA	8/13/16	10/29/16
Seattle PSC 1	JMCSO	9/30/16	3/30/17
	TinyGian	**9/12/15**	**9/12/17**
Seattle PSC 2	BeauPlan	4/29/16	
	D-Day	3/29/14	6/30/19
	G3DNW	11/20/15	4/30/17
	NPA	2/12/16	2/11/17
Shanghai 3D STM	FOTB	1/1/16	12/31/16
	GCA		12/31/16
Shreveport	BeauPlan	4/29/16	
	NPA	2/12/16	2/11/17
Singapore DC	ACGOTS	8/1/16	12/1/16
Singapore SC	MOTUW	6/13/16	12/31/17
Sinsheim	GCA	10/31/09	12/31/16
	HumpbWha	5/21/15	1/31/17
	NPA	3/4/16	2/28/17
Sioux Falls	AOTE	4/1/16	6/30/17
	JTS	8/19/16	8/19/17
	LastReef	**1/30/15**	**6/30/17**
	RobotsNG	3/4/16	
Speyer Dome	**Dolphins**	**8/22/12**	**12/31/16**
	Dolphins		12/31/16
	Jerusale	**12/12/13**	**1/8/17**
	MOF	1/1/15	12/31/16
Stockholm	JTTSP	2/14/14	12/31/16
	WildAfri	**6/1/16**	**6/30/17**
Sudbury	BeauPlan	4/29/16	
	D-Day	5/30/16	6/1/17
	ExtrWeat	**10/15/16**	**10/14/17**
	GruffChi	2/1/16	12/31/16
	GWS	3/3/16	3/31/17
	NPA	2/12/16	2/11/17
	ROTB	9/15/16	12/31/16
	TinyGian	**6/4/16**	**5/31/17**
	WM	4/1/16	12/31/16
Sydney WBS	NPA	2/25/16	2/24/17
Syracuse MOST	Amazon	4/1/16	5/31/17
	Dolphins	4/1/16	5/31/17
	Dragons	7/2/16	7/1/17
	FOTB	7/4/15	7/3/17
	JTS	10/1/16	4/1/17
	UWT3D	4/23/16	10/22/16
Taichung NMNS	JMCSO	7/1/16	12/31/16
	JTS	7/1/16	6/30/17
Taipei AM	JTS	7/1/16	7/1/17
Tallahassee CLC	BeauPlan	4/29/16	
	FOTB	1/18/13	6/30/17

Theater	Film	Open	Close
	HidUniv	2/14/14	12/31/16
	HumpbWha	2/20/15	12/31/16
	LastReef	**1/17/14**	**6/30/17**
	NPA	2/19/16	2/18/17
	RobotsNG	10/16/15	10/15/16
	WildAfri	**5/15/16**	**5/31/17**
Tampa MOSI	BeauPlan	4/29/16	
	DinoAliv	1/30/16	6/30/17
	GWS	**1/1/16**	**6/30/18**
	MOTUW	**11/21/14**	**11/20/16**
	NPA	2/12/16	2/11/17
	RobotsNG	**10/5/16**	**10/4/17**
Tijuana	HumpbWha	7/15/16	7/14/17
	JTS	4/1/16	4/1/17
	NPA	2/19/16	2/18/17
	PTJH	10/17/15	10/16/16
	WildAfri	**10/1/16**	**3/31/17**
Toronto OSC	BeauPlan	4/29/16	
	NPA	7/1/16	6/30/17
Toulouse CDE	JTS	2/1/16	1/7/17

Theater	Film	Open	Close
Valencia Spn	FOTB	7/1/15	6/30/17
	HidUniv	4/1/14	12/31/16
	NPA	**10/7/16**	**10/6/17**
	RobotsNG	3/11/16	3/10/17
	SeaMonst	**7/1/16**	**12/31/17**
	WWDPP3D	**7/1/16**	**7/31/17**
Vancouver TWS	Bugs	3/11/06	6/30/17
	D-Day	11/7/15	11/12/17
	FOTB	6/16/13	6/30/17
	HumpbWha	10/9/15	12/30/16
	NPA	2/12/16	2/11/17
	TOTIA	**6/1/16**	**6/30/17**
Victoria DCI	BeauPlan	4/29/16	
	D-Day	3/21/14	12/31/16
	ExtrWeat	**10/28/16**	**10/14/17**
	FOTB	4/5/13	6/30/17
	LITAOA	6/10/16	6/9/17
	MOTUW	10/9/15	10/8/16
	NPA	2/12/16	3/3/17
Virginia Beach AMSC	**ExtrWeat**	**10/15/16**	**10/14/17**

Theater	Film	Open	Close
	G3DNW	5/28/16	5/27/17
	HumpbWha	9/8/15	10/31/16
	MOTUW	2/1/16	2/11/17
	NPA	2/12/16	2/11/17
Vulcania	TA	3/13/16	11/30/16
	Vulcania	2/22/02	
Washington NASM	BeauPlan	4/29/16	
	D-Day	5/23/14	10/30/16
	JTS	3/6/15	
	ToFly	3/7/16	12/31/17
Washington NMNH	FOTB	10/5/12	1/13/17
	JMCSO	3/20/15	3/20/17
	MOTUW	**9/26/14**	**9/30/17**
	NPA	2/12/16	2/11/17
Yellowstone	NPA	5/1/16	4/30/17
	Yell	**5/1/14**	**12/31/17**
Zion	NPA	2/12/16	2/11/17
	ZionCany	7/1/08	

Key to Film Abbreviations

Film	Title	Year		Dist
ACGOTS	Aircraft Carrier: Guardian of the Seas	2016	3D	K2
Africa	Africa: the Serengeti	1994		HMNS
AirRacer	Air Racers 3D: Forces of Flight	2012	3D	3DED
AIWC	Adventures in Wild California	2000		MFF
Amazon	Amazon	1997		MFF
AMMM	Amazing Mighty Micro Monsters 3D	2016	3D	SER
Animalop	Animalopolis	2008	3D	K2
AOTE	Antarctica 3D: On the Edge	2014	3D	GSF
AsterME	Asteroid: Mission Extreme	2016	3D	NGD
BeauPlan	Beautiful Planet, A	2016	3D	IMAX
Bugs	Bugs!	2003	3D	SKF
CRA	Coral Reef Adventure	2003		MFF
CV	Cosmic Voyage	1996		IMAX
D-Day	D-Day: Normandy 1944	2014	3D	K2
DIA	Dream is Alive, The	1985		IMAX
DinoAliv	Dinosaurs Alive	2007	3D	GSF
Dolphins	Dolphins	2000		MFF
Dragons	Dragons: Real Myths and Unreal Creatures	2013	3D	B&D
DSC	Deepsea Challenge 3D	2015	3D	NGD
Everest	Everest	1998		MFF
ExtrWeat	Extreme Weather	2016	3D	NGD
FightPil	Fighter Pilot: Operation Red Flag	2004	3D	K2
FlyMons	Flying Monsters 3D	2011	3D	NGD
FMTTM	Fly Me to the Moon	2008	3D	nWP
FON	Forces of Nature	2004		NGD
FOTB	Flight of the Butterflies	2012	3D	SKF
G3DNW	Galapagos 3D: Nature's Wonderland	2014	3D	nWP
GC	Grand Canyon: The Hidden Secrets	1985		K2
GCA	Grand Canyon Adventure: River at Risk 3D	2008	3D	MFF
Gruffalo	Gruffalo, The	2014	3D	B&D
GruffChi	Gruffalo's Child	2015	3D	B&D
GWS	Great White Shark	2013	3D	GSF
HCBTD	Hearst Castle: Building the Dream	1996		K2
HidUniv	Hidden Universe	2013	3D	MFF
HOTB	Hurricane on the Bayou	2006		MFF
HumpbWha	Humpback Whales	2015	3D	MFF
Jerusale	Jerusalem	2013	3D	NGD
JIAC	Journey into Amazing Caves	2001		MFF
JMCSO	Jean-Michel Cousteau's Secret Ocean	2015	3D	3DED
JTM	Journey to Mecca	2009		SKF
JTS	Journey to Space	2015	3D	K2
JTTSP	Journey to the South Pacific	2013	3D	MFF
Kenya	Kenya 3D: Animal Kingdom	2013	3D	3DED
L&C	Lewis & Clark: Great Journey West	2002		NGD
LastReef	Last Reef, The	2012	3D	GSF
LITAOA	Living in the Age of Airplanes	2015		NGD
LivingSe	Living Sea, The	1995		MFF
LOF	Legends of Flight	2010	3D	K2
MOC	Mysteries of China	2016	3D	GSF
MOF	Magic of Flight, The	1997		MFF
MOTN	Mystery of the Nile	2005		MFF
MOTUW	Mysteries of the Unseen World	2013	3D	NGD
Mummies	Mummies: Secrets of the Pharaohs	2007		GSF
ND	Neelkanth Darshan	2005		unk
Niagara	Niagara: Miracles, Myths, and Magic	1987		K2
NPA	National Parks Adventure	2016	3D	MFF
Ozarks	Ozarks: Legacy and Legend	1993		IMAX
Penguins	Penguins 3D	2013	3D	nWP
PTJH	Pandas: The Journey Home	2014	3D	NGD
Rescue	Rescue 3D	2011	3D	K2
Rheged	Rheged: The Lost Kingdom	2000		unk
RME	Rocky Mountain Express	2011		SLC
RobotsNG	Robots	2015	3D	NGD
ROTB	Room on the Broom	2015	3D	B&D
SeaMonst	Sea Monsters: A Prehistoric Adventure	2007		NGD
SeaRex	Sea Rex: Journey to a Prehistoric World	2010	3D	3DED
SFLIS	Search for Life In Space 3D, The	2016	3D	MFF
Sharks3D	Sharks 3D	2004	3D	3DED
SpaceNex	Space Next 3D	2015	3D	B&D
TA	Tornado Alley	2011	3D	GSF
TinyGian	Tiny Giants 3D	2014	3D	GSF
ToFly	To Fly!	1976		MFF
TOTIA	Titans of the Ice Age	2013	3D	GSF
TTA	To the Arctic	2012	3D	IMAX
UWT3D	Ultimate Wave Tahiti 3D, The	2010	3D	K2
VanGogh	Van Gogh: Brush with Genius	2009		MFF
Vikings	Vikings	2004		GSF
VOT	Voyage of Time	2016		IMAX
Vulcania	Vulcania	2002		unk
WATE	Wild Australia: The Edge	1997		NGD
WildAfri	Wild Africa 3D	2015	3D	GSF
WildCats	Wild Cats 3D	2015	3D	nWP
WildOcea	Wild Ocean	2008	3D	GSF
WM	Watermelon Magic	2013	3D	B&D
WOTA	Wonders of the Arctic	2014	3D	GSF
WWDPP3D	Walking With Dinosaurs: Prehistoric Planet 3D	2014	3D	GSF
Yell	Yellowstone	1994		GSF
ZionCany	Zion Canyon	1994		K2

Oct.-Nov. 2016 Bookings Count

#	Film	#	Film	#	Film	#	Film
84	NPA	6	WM	2	Gruffalo	1	LOF
39	JTS	5	DSC	2	GruffChi	1	ND
38	FOTB	5	FightPil	2	JTM	1	Ozarks
35	BeauPlan	5	FlyMons	2	Kenya	1	Penguins
24	ExtrWeat	5	GCA	2	MOF	1	Rheged
23	HumpbWha	5	HidUniv	2	Niagara	1	RME
22	G3DNW	5	MOC	2	Rescue	1	SeaRex
20	RobotsNG	5	WOTA	2	ROTB	1	Sharks3D
19	MOTUW	4	ACGOTS	2	TA	1	SpaceNex
19	WildAfri	4	JTTSP	2	ToFly	1	TOTIA
18	JMCSO	4	SeaMonst	2	WildCats	1	UWT3D
16	D-Day	3	CRA	1	Africa	1	VanGogh
14	Jerusale	3	FON	1	AirRacer	1	Vikings
14	LITAOA	3	JIAC	1	Amazon	1	VOT
13	TinyGian	3	MOTN	1	Animalop	1	Vulcania
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www.FishEyeProject.org

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www.imaxmelbourne.com.au/

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http://rbcm1.rbcm.gov.bc.ca/index.html

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Fax: 818-622-0407
www.universalstudios.com

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SHORTS

D3D's laser dome in Cleveland

D3D Cinema completed the first installation of the D3D/Christie laser dome projection system in October at the **Great Lakes Science Center** in Cleveland, OH. The system consists of three Christie Mirage 4K laser projectors mounted sideways (short side up) in the rear gallery of the theater to fill the 75-foot (23-meter) dome with an image that is 4,096 pixels high and about 5,700 wide (allowing for the two blends), closely approximating the 1.43 ratio of 15/70 film. The three images are combined with Christie's auto-alignment and auto-blending technology. The system uses a proprietary file format for playback of GS content. D3D tells *LF Examiner* that it will provide conversion services to all producers at reasonable rates.

D3D Cinema invited 20 existing dome operators to demonstrations of the system in November and tells *LFX* that it expects to announce another dome signing in a few weeks.

The December issue of *LF Examiner* will include a more complete report on the system, including comments and impressions from theater reps who attended the demos.

Cleveland's Great Lakes Science Center has D3D's first laser dome system.

GSCA's new board members

The **Giant Screen Cinema Association** has announced the results of the election for its 2017 board of directors. The following will join the board for a two-year term beginning on Jan. 1, 2017:

Representing institutional theaters: **Kim Cavendish**, **Museum of Discovery and Science**; **Julie La Roche**, **Montreal Science Centre**; **Alan Nursall**, **Telus World of Science Edmondton**; **Gordon Stalans**, **Tennessee Aquarium**.

Representing distributors: **Tina Ratterman**, **BIG and Digital**.

Representing production: **Jonathan Barker**, **SK Films**; **Christian Fry**, **Pretend Entertainment**; **Phil Streather**, **Principal Large Format**.

Representing manufacturers, suppliers, and other related businesses: **Rick Gordon**, **RPG Productions**; **Mike Lutz**, **Imax Corporation**.

Peter Bak-Larsen, **Tycho Brahe Planetarium**, is an *ex officio* director designated by **Euromax**.

The newly elected directors join 11 other members who have another year remaining on their terms.

IMAX to launch VR in UK, LA

Imax Corporation is setting up pilot virtual-reality (VR) installations in multiplexes in Manchester, U.K., and Los Angeles that will be open by the end of the year. Additional test sites are expected to open in China, Japan, the U.S., the Middle East, and Western Europe early next year. The U.K. site will be the **Odeon Manchester IMAX @ The Printworks**; the location of the L.A. site was not disclosed.

The VR centers will feature multiple "pods" that will give customers five- to 15-minute interactive experiences that can be single- or multi-user, based on content derived from feature films and/or video games. Tickets will cost $10–12. The company says it is in "advanced stages with several content developers, including Hollywood studios and gaming publishers," and has announced a $50 million fund to produce new 25 VR experiences over the next three years.

The pilot sites will test out pricing, types of content, and the overall customer experience. As reported previously, the headsets for the IMAX VR Experience are being provided by **Starbreeze AB** of Sweden in conjunction with Taiwan-based electronics maker **Acer**.

65mm lab opens in London

Cinelab, a post-production house located in Slough, to the west of London, has installed a **Kodak** 65mm film processor, and is now the only facility capable of processing 65mm negative stock outside Los Angeles. The last 65mm lab in Europe, **Arane Gulliver**, closed in November 2014. Cinelab will also offer 65mm scanning.

The deal, in partnership with Kodak, adds to Cinelab's existing 35mm and 16mm processing capabilities, and gives filmmakers shooting 65mm in Europe faster turnaround than shipping their footage to **FotoKem** in California, the only other 65mm processing lab in the world.

Twentieth Century Fox's *Murder on the Orient Express*, directed by **Kenneth Branagh** and photographed by Haris Zambarloukis, BSC, will be one of the first features to use the new processor.

Imax lasers in NYC, Chicago

AMC Theaters has installed the IMAX laser projection system in two high-profile locations: the **Loews Lincoln Square IMAX** in New York City, and Chicago's **Navy Pier IMAX**, which it is now operating under the AMC brand. (It was previously managed by **Imax Corporation** on behalf of Navy Pier, Inc.) Both theaters premiered their laser systems on Nov. 18 with ***Fantastic Beasts and Where to Find Them***.

The New York theater has the largest screen in North America — 75.6x101 feet

*(see **SHORTS** on page 15)*